

## CHAPTER 4.0 FINAL SECTION 4(f) EVALUATION

---

### 4.1 Introduction

This Section 4(f) evaluation is prepared in accordance with 23 USC 138 and the Federal Highway Administration (FHWA) regulations for Section 4(f) compliance (23 CFR 774). Additional guidance has been obtained from the following sources:

- FHWA's *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (1987);
- FHWA's revised *Section 4(f) Policy Paper* (2005);
- FHWA and the Federal Transit Administration's (FTA's) *Guidance for Determining De Minimis Impacts to Section 4(f) Resources* (2005);

This chapter of the EIS also considered potential conversions of land protected by Section 6(f) of the Land and Water Conservation Act (LWCF).

### 4.2 Regulatory Setting

#### 4.2.1 Section 4(f) of the Department of Transportation Act of 1966

Section 4(f) of the Department of Transportation Act of 1966 prohibits the U.S. Secretary of Transportation from approving any program or project that:

...requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance as determined by the Federal, State, or local officials having jurisdiction thereof, or any land from an historic site of national, State, or local significance as so determined by such officials unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site resulting from such use.

The requirements of Section 4(f) only apply to agencies within the USDOT (e.g., FHWA, FTA, Federal Aviation Administration). The USDOT can approve the use of Section 4(f) property by making a finding of *de minimis* impact for that property. If such a finding is made, an evaluation of avoidance alternatives is not required<sup>1</sup>.

To provide additional context for the Section 4(f) findings in this evaluation, the following sections provide information regarding each of the steps in the process for complying with Section 4(f):

- Identifying Section 4(f) resources;
- Determining whether there is a "use" of any Section 4(f) resource;
- Determining which of the uses, if any, are "*de minimis*"; and
- Identifying and evaluating avoidance and minimization alternatives for any uses that are not determined to be *de minimis*.

---

<sup>1</sup> The option of making a finding of *de minimis* impact was created by an amendment to Section 4(f) in Section 6009 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which was enacted in August 2005.

#### 4.2.1.1 Identifying Section 4(f) Resources

Section 4(f) applies to publicly owned parks, recreation areas, and wildlife and waterfowl refuges, as well as significant historic properties (whether publicly or privately owned). FHWA is responsible for identifying the Section 4(f) resources in a project area and for determining whether a project will result in the use of such resources. This determination is based on information gathered during the National Environmental Policy Act (NEPA) process and considers input received from officials who have jurisdiction over the Section 4(f) resources, including public agencies that manage or own the resources and the State Historic Preservation Office (SHPO).

Publicly owned land is considered to be a park, recreation area or wildlife and waterfowl refuge when the land has been officially designated as such by a Federal, State or local agency and the officials of these governmental entities, having jurisdiction over the land, determine that one of the major purposes and functions of the property is a park, recreation area, or a wildlife refuge. Incidental, secondary, occasional or dispersed park, recreational or refuge activities do not constitute a major purpose.

A historic site is significant only if it is on or eligible for the National Register of Historic Places (NRHP), unless FHWA determines that the application of Section 4(f) is otherwise appropriate (Federal Highway Administration 2005).

#### 4.2.1.2 Use of Section 4(f) Resources

Section 4(f) use, as defined in 23 CFR 774.17, occurs in any of the following cases:

- Land is permanently incorporated into a transportation facility through partial or full acquisition (i.e. “direct use”);
- There is temporary occupancy of land that is adverse in terms of the preservationist purpose of Section 4(f) (i.e. “temporary use”); or
- There is no permanent incorporation of land, but the proximity of a transportation facility results in impacts so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired (i.e. “constructive use”).

As outlined in 23 CFR 774.15, a constructive use of a protected resource occurs under any of the following situations:

- (i) The projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise-sensitive facility of a resource protected by Section 4(f), such as hearing the performances at an outdoor amphitheater, sleeping in the sleeping area of a campground, enjoyment of a historic site where a quiet setting is a generally recognized feature or attribute of the site’s significance, or enjoyment of an urban park where serenity and quiet are significant attributes;
- (ii) The proximity of the proposed project substantially impairs the aesthetic features or attributes of a resource protected by Section 4(f), where such features or attributes are considered important contributing elements to the value of the resource;
- (iii) The project results in a restriction on access which substantially diminishes the utility of a significant publicly owned park, recreation area, or historic site;
- (iv) The vibration impact from operation of the project substantially impairs the use of a Section 4(f) resource, such as projected vibration levels from a rail transit project that are great enough to affect the structural integrity of a historic building or substantially diminish the utility of the building; and
- (v) The ecological intrusion of the project substantially diminishes the value of wildlife habitat in a wildlife or waterfowl refuge adjacent to the project or substantially interferes with the access to a wildlife or waterfowl refuge, when such access is necessary for established wildlife migration or critical life processes.

#### 4.2.1.3 *De Minimis* Impact Findings

The requirements of Section 4(f) will be considered satisfied with respect to a Section 4(f) resource if it is determined that a transportation project will have only a "*de minimis* impact" on the 4(f) resource. The provision allows avoidance, minimization, mitigation and enhancement measures to be considered in making the *de minimis* determination. The Agencies with jurisdiction must concur in writing with the determination. *De minimis* impact is defined in 23 CFR 774.17. *De minimis* impact means:

- For parks, recreation areas, and wildlife and waterfowl refuges, a *de minimis* impact is one that will not adversely affect the features, attributes or activities qualifying the property for protection under Section 4(f).
- For historic sites, *de minimis* impact means that the Administration has determined, in accordance with 36 CFR part 800 that no historic property is affected by the project or the project will have "no adverse effect" on the property in question.

#### 4.2.1.4 Avoidance and Minimization Alternatives

If an alternative would use a Section 4(f) resource and the use is not *de minimis*, FHWA cannot approve that alternative unless

- (1) there is no prudent and feasible avoidance alternative; and
- (2) the project includes all possible planning to minimize harm resulting from the use.

These avoidance and minimization findings are made with regard to each individual Section 4(f) resource that would be used by an alternative. For example, if an alternative uses land from several different parks and historic properties, the Section 4(f) evaluation will consider avoidance and minimization options for each of those resources.

In addition, avoidance and minimization is considered more globally when comparing alternatives. For example, if there are two alternatives, FHWA will compare the alternatives overall in terms of their level of impact on Section 4(f) resources. Generally, if there are any prudent and feasible alternatives that completely avoid the use of any Section 4(f) resources, FHWA must select one of them; if all of the prudent and feasible alternatives involve some use of Section 4(f) resources, FHWA must compare the alternatives and select the prudent and feasible alternative that minimizes harm to Section 4(f) resources.

#### 4.2.1.5 Least Overall Harm

In cases where analysis concludes there is no feasible and prudent avoidance alternative, the FHWA may approve only the alternative that causes the least overall harm to Section 4(f) resources. Least overall harm is determined by balancing the factors listed in 23 CFR 774.3(c)i-vii.

### 4.2.2 *Section 6(f) of the Land and Water Conservation Fund Act*

State and local governments often obtain grants under Section 6(f) of the Land and Water Conservation Fund (LWCF) Act of 1965, as amended (16 USC 4601–4604 et seq.), to acquire or make improvements to parks and recreation facilities. Section 6(f)(3) contains provisions to protect these investments and specifically prohibits the conversion of property acquired or developed with these grants to non-recreational use without the approval of the National Park Service, part of the U.S. Department of the Interior (USDOL).

Section 6(f)(3) directs USDOL to ensure that replacement lands of equal monetary value, location, and usefulness are provided as conditions for these conversions. Therefore, when conversions of LWCF-assisted lands are proposed for transportation projects, replacement lands must be provided (National Park Service 1991).

## 4.3 Summary of Proposed Action

For the purposes of this chapter Alternative 4 is called the Proposed Action (see Section 4(f) outline in the FHWA Technical Advisory 6640.8A, part IX on page 44). It should be noted that for this chapter the Proposed Action includes the four Provo/Orem options and the three American Fork Main Street options. The Proposed Action would provide for major widening and reconstruction of the existing I-15 facility from south Payson in Utah County to 12300 South in Salt Lake County (see Figure 4-1 on page 4-6). The I-15 study area is 43 miles long. Generally, the improvements include increasing the number of travel lanes on I-15 to meet the project's purpose and need, improve interchange configurations, and improve roadway geometry along I-15 to increase safety. A complete and detailed discussion is found in Chapter 2 of this EIS.

### 4.3.1 Summary of Purpose and Need for Action

The purpose and objectives are to relieve 2030 peak-hour congestion within the I-15 corridor to acceptable levels, on mainline I-15, on the existing 22 interchanges, and interchange components which provide access to and from local communities. The secondary purposes or objectives of this project include:

- Achieving Level of Service (LOS) D on I-15, interchanges and their components for the year 2030;
- Improving roadway safety by upgrading substandard roadway, bridge, and interchange elements to current American Association of State Highway Transportation Officials (AASHTO) and UDOT design standards;
- Providing consistency with Regional Transportation plans prepared by MAG and WFRC;
- Improving the regional and intra-county movement of people and goods;
- Providing a transportation system that is reasonably consistent with locally adopted land use and transportation plans and with the stated objectives of local governments and communities.

As documented in Chapter 1 the need for this project includes the following:

- The year 2030 LOS for I-15 will decline such that it is below the project goal of LOS D. Figure 1-2 provides a comparison of the year 2005 and year 2030 No Build LOS;
- There are sections of the freeway that have crash severity that exceeds the statewide average;
- There are 68 bridges that do not meet current vertical clearance standards;
- There are 14 bridges whose structural sufficiency ratings, combined with substandard vertical clearance, require either reconstruction or full replacement; and
- There are 15 vertical curves and 2 horizontal curves that are substandard due to inadequate stopping sight distance; two ramps which have inadequate acceleration length.

A full discussion of purpose and need is provided in Chapter 1 of this EIS.

### 4.3.2 Summary of Alternatives

The following is a description of the alternatives advanced in this EIS. The process by which these alternatives were developed involved a multiphase screening of several initial alternatives and their ability to meet purpose and need. A full description of the range of alternatives, the screening process, and the reasons for elimination of some alternatives is described in detail in Chapter 2.

Two alternatives were identified for advancement into full evaluation in this EIS: Alternative 1 (No Build) and Alternative 4 (I-15 Widening and Reconstruction).

#### 4.3.2.1 Alternative 1: No Build

The definition of Alternative 1 (No Build) was revised to take into account both the advancement of Commuter Rail Transit (CRT) into the Utah Transit Authority's (UTA) local project development process and decisions made in the



Mountain View Corridor EIS regarding the location of the southern connection of the proposed Mountain View Corridor to I-15 in Utah County. As a result, Alternative 1 consists of the following elements:

- All highway and transit projects identified in the Mountainland Association of Governments (MAG) Utah Valley 2030 Regional Transportation Plan (2005 adopted version)<sup>2</sup> except for I-15 widening and reconstruction;
- All highway and transit projects identified in the Wasatch Front Regional Council (WFRC) 2007-2030 Regional Transportation Plan<sup>3</sup> except for I-15 widening and reconstruction. As the Regional Transportation Plan includes I-15 widening and reconstruction, No Build must exclude it to provide an alternative that is the basis for comparison;
- Proposed Mountain View Corridor as a freeway connecting to I-15 at Lehi 2100 North;
- Ongoing routine I-15 pavement preservation projects;
- Ongoing routine I-15 bridge preservation projects; and
- Commuter Rail Transit from the Provo University Avenue Station to the Salt Lake Intermodal Station (UTA's Frontrunner).

#### 4.3.2.2 Alternative 4: I-15 Widening and Reconstruction (Preferred Alternative)

As described in Section 2.1.5 of Chapter 2, the commuter rail component of Alternative 4 was studied and approved by the Utah Transit Authority (UTA) in October 2007, in a separate environmental study. Therefore, there is no consideration of 4(f) issues for commuter rail.

Chapter 2 identifies Alternative 4, with the American Fork Option C and Provo/Orem Option D, as the Preferred Alternative. Alternative 4 includes widening and reconstruction of the existing I-15 facility, and involve the following:

- Addition of general purpose lanes;
- Extension of express lanes to US-6 in Spanish Fork;
- Reconstruction of interchanges;
- Improvements to bridges that cross the roadway;
- Improvements to connecting arterial streets, and
- Construction of a new interchange at North Lehi.

In the option areas, the Preferred Alternative includes Option D in Provo/Orem, and Option C in American Fork. These include:

- Widening and reconstruction of I-15;
- A fly-over at the University Parkway Interchange;
- Re-alignment of Provo 820 North; and
- A "North SPUI" in American Fork.

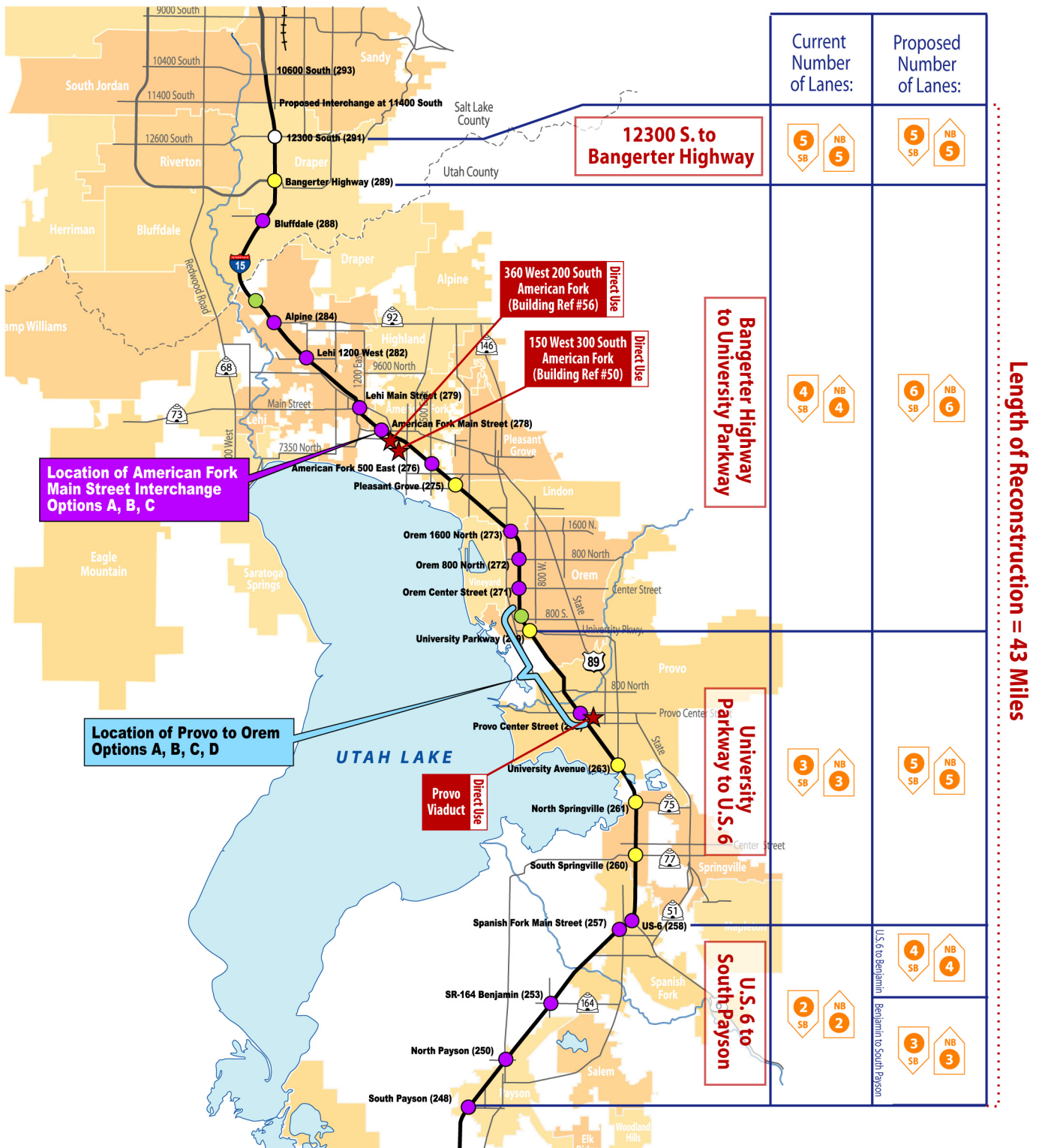
Other elements, such as frontage roads in the Provo/Orem area (Options A and B), a new Orem 800 South Interchange (Provo/Orem Options A and C), and other interchange alignments at American Fork Main Street (Options A and B) are not included in the Preferred Alternative. These options are presented for comparative purposes.

---

<sup>2</sup> The Utah Valley 2030 Regional Transportation Plan is available for viewing on the MAG website located at [www.mountainland.org](http://www.mountainland.org).

<sup>3</sup> The WFRC 2030 Regional Transportation Plan is available for viewing on the WFRC website located at [www.wfrc.org](http://www.wfrc.org).

# I-15 CORRIDOR EIS | UTAH COUNTY - SALT LAKE COUNTY



Scale in Miles  
0 1 2 3 4 5

## LEGEND:

- I-15 within Roadway Study Corridor
- I-15 Interchanges within the I-15 South Study Corridor
- UTA TRAX

Segment Lane Configuration Symbol  
Direction of Travel  
Number of Lanes

- Reconstruct Existing Interchange
- Modify/Improve Existing Interchange
- Construct New Interchange

- Locations of Direct Use (non-de minimis) Section 4(f) Resources



Figure 4-1  
Summary of Proposed Action

## 4.4 Identification of Section 4(f) Resources

This section identifies and describes the Section 4(f) resources in the study area that could be affected by the Proposed Action. This section discusses public parks and recreation areas, followed by historic resources.

### 4.4.1 Recreation Resources

The recreation resources considered in this EIS are those located within one-quarter mile (1,320 feet) of the highway on either side of the existing I-15 freeway from 800 South in Payson to 12300 South in Draper. Resource specialists determined that in this urban setting, a one-half mile wide area (one-quarter mile on each side of the right-of-way line of I-15) was a reasonably conservative area in which to assess potential impacts on Section 4(f) recreational resources. These resources include publicly owned trails, parks, and recreational facilities. No wildlife or waterfowl refuges are located within this area. A summary of the publicly owned parks, recreation facilities, and existing trails that are located within the I-15 Corridor is provided below in Table 4-1 and shown on Figures 4-2 and 4-3. In all, 21 parks, one trailhead, and one regional trail are located within one-quarter mile of the corridor. Information on planned or proposed trails in the project vicinity is provided in Section 3.10 of this EIS.

Table 4-1: Recreation Resources Located within the I-15 Corridor

Resource	Location / Description
Hillman Fields (also known as Orchard Hills Ball Park)	800 West 800 South, Payson—This 18.3-acre ball park, owned and maintained by Payson City, has two Pony League baseball fields, two youth/women's softball fields, two Little League baseball fields, concessions, and restroom facilities.
Pioneer Square	439 West Utah Avenue, Payson—This 3.48-acre open space area, owned and maintained by Payson City, is landscaped with grass and located at the Payson City Center. The Payson City offices, the Daughters of Utah Pioneers museum, and a pioneer cabin are located on-site.
North Park	507 East 1000 North, Spanish Fork—The park has a lighted pavilion that seats 100 people, restrooms, a 246-stall parking lot, 12 picnic pavilions, six uncovered picnic tables, two baseball fields, one volleyball court, and a one-acre pond (no fishing). North Park is owned and maintained by the City of Spanish Fork.
East Bay Golf Course	1860 South 380 East, Provo—This 18-hole golf course (approximately 200 acres), owned and operated by Provo City, includes a restaurant, a pro-shop, and restrooms.
Powerline Park #1	500 West 1400 South, Provo—This four-acre park, maintained by Provo City, has four picnic tables and a playground area. It is one of three small parks that Provo City leases from Rocky Mountain Power and maintains as a public park. The park has been leased by Provo City since 1986 and was renewed on November 20, 2006, for an additional 10 years.
Sunset View Park	525 South 1600 West, Provo—This 14-acre park, owned and maintained by Provo City, has playground equipment and restrooms.
West Park	1700 West 100 North, Provo—This two-acre park, owned and maintained by Provo City, has two picnic tables, a basketball court, and open space.
Fort Utah Park	200 North Geneva Road, Provo—This 15-acre park, owned and maintained by Provo City, has two pavilions, 14 picnic tables, a playground area, restrooms, a fort replica, a rugby field, a sand volleyball court, a baseball field, and a skate park. The baseball field is limited to league use only. A connection to the Provo River Parkway Trail is located along the north edge of the park.

Table 4-1: Recreation Resources Located within the I-15 Corridor - continued

Resource	Location / Description
Provo River Parkway Trail	This 15-mile regional trail begins at Utah Lake State Park, parallels the Provo River for 5 miles, follows University Avenue to Provo Canyon, and terminates up-canyon at Vivian Park. I-15 crosses over the trail and Provo River at an existing bridge at approximately 400 North in Provo. This regional trail connects to several parks within the city. Provo City owns and maintains the trail segment located within its municipal boundaries.
Geneva Road Trailhead	350 North Geneva Road, Provo—This one-acre trailhead, owned and maintained by Provo City, has a picnic area, a parking area, a drinking fountain, and access to fishing. The trailhead is an access point for the Provo River and Provo River Parkway Trail.
Paul Ream Wilderness Park	1600 West 500 North, Provo—This seven-acre park, owned and maintained by Provo City, has four pavilions, single and group picnic tables, restrooms, a duck pond, a gazebo, a nature trail with picnic tables, and fishing areas. The Provo River Parkway Trail connects to this park.
Harbor Park	800 North 2450 West, Provo—This five-acre park, owned and maintained by Provo City, has a pavilion, four picnic tables, a barbecue grill, a playground area, and open space areas landscaped with grass.
Nielsen's Grove	2000 South Sandhill Road, Orem—This 21.4-acre park, owned and maintained by the City of Orem, has a reflecting pool, a fountain, a pond, a parterre garden (formal garden), a greenhouse, a barn, eight picnic tables, restrooms, and the Nielsen's Grove Museum.
Orem City Skate Park	355 N 1200 West, Orem—This three-acre skateboard park, owned and maintained by the City of Orem, includes restroom facilities. An open area landscaped with grass adjacent to the skateboard park functions as a stormwater detention facility. During periods of high runoff, stormwater is also detained in the skateboard park.
Greenwood Park	500 South 200 East, American Fork—This 5.14-acre park, owned and maintained by American Fork City, contains a skateboard park, open space, and a Little League baseball field.
Rotary Park	400 South 200 East, American Fork—This 9.6-acre park, owned and maintained by American Fork City, has a pavilion, picnic tables, a playground area, restrooms, and grass areas with shade trees.
Bicentennial Park	350 South Center, American Fork—This 3.29-acre park, owned and maintained by American Fork City, has monuments, a playground area, and a sand volleyball court.
Lions Park	100 South 300 West, American Fork—This 3.5-acre park, owned and maintained by American Fork City, has a pavilion, picnic tables, and a playground area.
Margaret Wines Park	500 North Center Street, Lehi—This 3.5-acre park, owned and maintained by Lehi City, has four pavilions, 48 picnic tables, a playground, and restrooms.
Bandwagon Park	900 North 200 West, Lehi—This 2.1-acre park, owned and maintained by Lehi City, has two pavilions, 16 picnic tables, a playground area, and restrooms.
Dry Creek Trail Park	100 West 1500 North, Lehi—This 10-acre park, owned and maintained by Lehi City, has a pavilion, eight picnic tables, a playground with a miniature zipline, a nine-hole disc golf course, and a 0.5-mile-long trail. The park is north of the Dry Creek drainage.
North Entrance Park	1875 North Trinnaman Lane, Lehi—This 1.5-acre open space area, owned and maintained by Lehi City, is landscaped with grass and includes a parking area.
Pilgrims Landing Park	3000 West Pilgrims Loop Road, Lehi—This six-acre park, owned and maintained by Lehi City, has a pavilion, eight picnic tables, and a playground area.



Figure 4-2

Section 4(f) Resources in the Study Area in South and Central Utah County

**LEGEND:**

- Section 4(f) Parks
- I-15 Corridor

**NRHP Eligible Historic Properties**

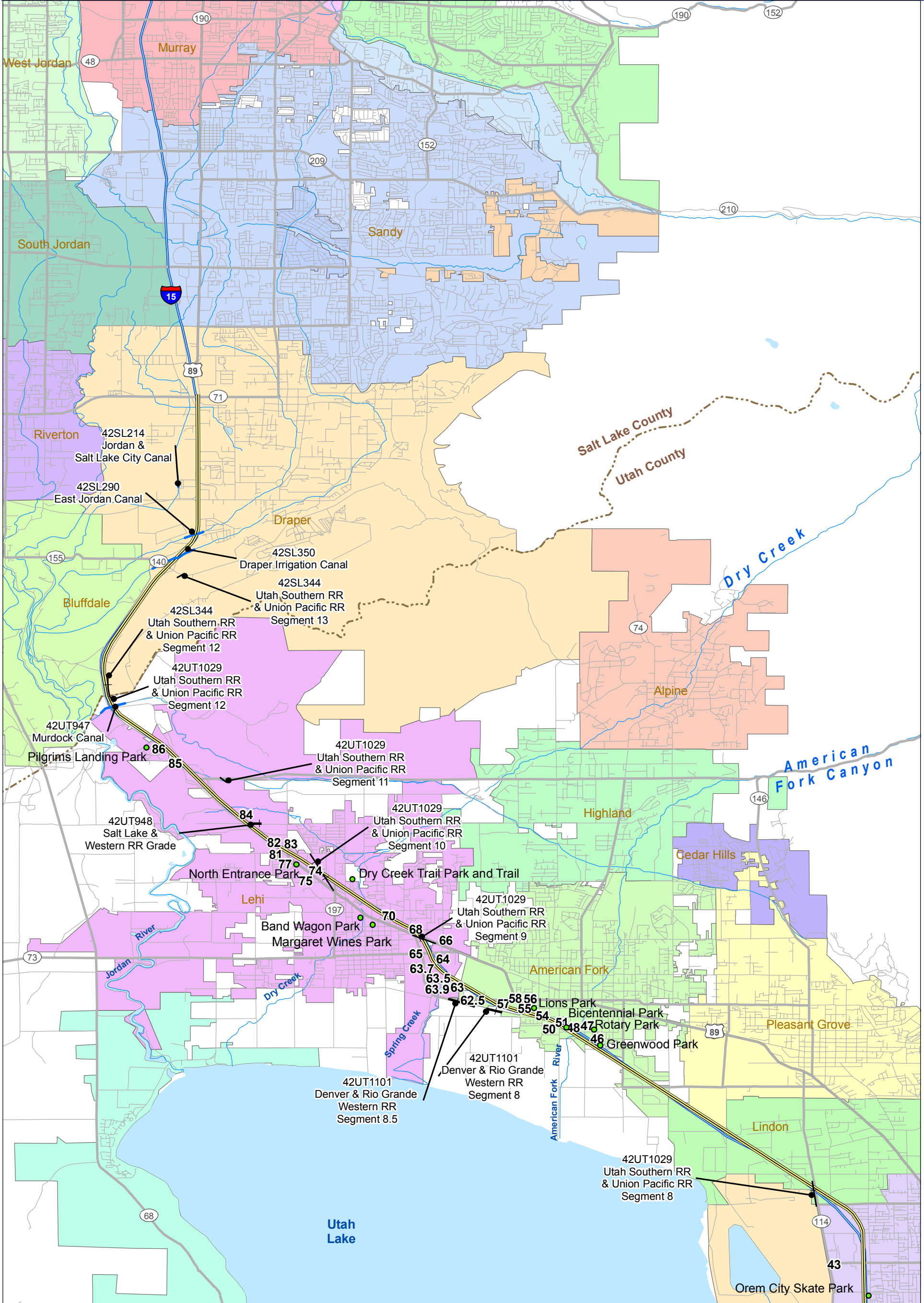
- Canals
- Provo Viaduct
- Railroads

**"1"** Building Reference #


Note: This figure is a graphic representation of the general location of Section 4(f) resources and is not to scale.


THIS PAGE INTENTIONALLY LEFT BLANK





## Section 4(f) Resources in the Study Area in North Utah County and South Salt Lake County

 Section 4(f) Parks  
 I-15 Corridor

 Canals  
 Provo Viaduct  
 Railroads

"1" Building Reference #



THIS PAGE INTENTIONALLY LEFT BLANK



#### 4.4.1.1 Section 6(f) Resources

Hillman Fields in Payson, North Park in Spanish Fork, and two sections of the Provo River Parkway Trail in Provo have been developed with grants authorized under the LWCF, qualifying them as Section 6(f) properties. The two sections of the Provo River Parkway Trail are located outside of the I-15 corridor (Riverside Park at 1260 West 600 North and Exchange Park at 900 North 700 West). As detailed in Table 4-1, Hillman Fields, North Park, and the Provo River Parkway Trail also qualify as recreation resources eligible for protection under Section 4(f). Their locations are shown on Figure 4-2.

#### 4.4.2 Historic Properties

The historic properties eligible for protection under Section 4(f) are those listed on, or eligible for listing on, the NRHP. The criteria for evaluating the significance of cultural resources are set forth in 36 Code of Federal Regulations (CFR) 60.4. These criteria are designated using a four-tier letter-code system (A–D), as presented below.

- Criterion A: Resource is associated with events that have made a significant contribution to the broad patterns of our history;
- Criterion B: Resource is associated with the lives of persons significant in our past;
- Criterion C: Resource embodies the distinctive characteristics of a type, period, or method of construction; represents the work of a master; possesses high artistic values; or represents a significant and distinguishable entity whose components may lack individual distinction; and
- Criterion D: Resource has yielded or may be likely to yield information important in prehistory or history.

As stated in Sec. 774.13(b) Section 4(f) (49 U.S.C. 303), “Section 4(f) does not apply to archeological sites where the Administration, after consultation with the SHPO and the ACHP, determines that the archeological resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. This exception applies both to situations where data recovery is undertaken or where the Administration decides, with agreement of the SHPO and, where applicable, the ACHP not to recover the resource”.

The original Determination of Eligibility and Finding of Effect (DOE/FOE) for historic and archaeological resources was signed by Utah SHPO on October 16, 2007. The DEIS reflected that consultation. As stated in the DEIS, a second round of consultation was underway at the time of publication, to accommodate design changes that resulted from the first consultation. As a result of the second consultation, an addendum DOE/FOE was submitted to the Utah SHPO for review and concurrence. The addendum DOE/FOE included changes to the October 2007 DOE/FOE, as follows:

- The Lake Bottom Canal and the Utah Southern Railroad Section 106 effect was changed from Adverse Effect to No Adverse Effect, because the amount of each resource affected was reduced by slight shifts in the I-15 mainline.
- The historic property located at 1260 West 800 South (Building Reference # 36) effect was changed from Adverse Effect for all Provo/Orem Options (A, B, C, and D) to an Adverse Effect for Provo/Orem Options A and C and a No Effect for Provo/Orem Options B and D; because a detention basin was removed from Option B and D.
- The following four historic properties, including their effects, have been added as a result of the information developed in the East-West Connector study:
  - 7122 (7110) West 7750 North American Fork (Map/Site Reference # 62.5);
  - 35 North 1020 West, American Fork (Map/Site Reference # 63.5);
  - 57 North 1020 West, American Fork (Map/Site Reference # 63.7); and
  - 8040 North Millpond Drive, Lehi (Map/Site Reference # 63.9).

This addendum DOE/FOE was signed by Utah SHPO on November 15, 2007, prior to publication of the DEIS. The October 2007 DOE/FOE and the November 2007 addendum are included in Appendix A. In February 2008, an Intensive Level Survey (ILS) was completed for two architectural resources described in the DEIS; 1260 West 800 South (Map/Site Reference #36), and 12 South 1160 West (Map/Site Reference #39), in Orem. The ILS provides an extra level of documentation that can be used when questions regarding particular historic structures arise, and provides further information regarding a resource's eligibility for the NRHP. The ILS was conducted in accordance with Utah SHPO guidelines and with the assistance of UDOT's architectural historian. Based on information presented in the ILS, UDOT submitted a second addendum DOE/FOE to Utah SHPO, recommending that the two structures are not eligible for listing on the NRHP. SHPO concurred on April 3, 2008. Therefore, information on the two structures has been removed from the tables and figures contained in this section. The second addendum is also included in Appendix A.

#### 4.4.2.1 Archaeological Resources

The archaeological resources eligible for protection under Section 4(f) are described in Table 4-2. Figures 4-2 and 4-3 show the general location of the resources in relation to the I-15 corridor. In all, 12 archaeological resources are eligible for listing on the NRHP. Of these, 11 have been previously recorded and determined eligible for listing on the NRHP. The West Union Canal was recorded during the surveys conducted for this project and determined eligible for listing on the NRHP under criterion A. None of these sites are considered important because of what information they can provide through data recovery. Each warrants preservation in place.

Table 4-2: Archaeological Resources

Resource (Site #)	NRHP Criteria	Location / Description
Denver & Rio Grande Western Railroad (42UT1101/42SL293)	A	The Denver & Rio Grande Western Railroad, now operated by the Union Pacific Railroad, extends through Utah and Salt Lake counties. In the 1880s, the Denver & Rio Grande Western Railroad was formed by the consolidation of several existing railroads in the Salt Lake Valley. The railroad runs in a northwest-southeast direction, crossing under I-15 in two locations as well as crossing five auxiliary roads.
South Field Canal (42UT935)	A, C	In 1915, this circa-1850 canal was integrated into the U.S. Bureau of Reclamation's Strawberry Valley Project, a major reclamation project providing residents with a reliable water supply. The canal remains in use today. The South Field Canal currently crosses under I-15 north of 7300 South in Spanish Fork. The canal as a whole is recommended as eligible for listing on the NRHP under criteria A and C. However, the portion of the canal in the area surveyed is eligible only under criterion A. Because this portion is contained in a culvert and maintained on a regular basis, it does not maintain integrity of design, materials, or workmanship.
Mill Race Canal (42UT1485)	A	The Mill Race Canal was constructed during the 1850s and expanded in 1858 to supply water for two local businesses. The canal diverts water from the Spanish Fork River, near the mouth of Spanish Fork Canyon, and flows west for a distance of 4 miles, where it splits into three branches. Two branches—the northern and middle branches—cross under I-15. The northern branch is located 328 feet north of SR-147. The middle branch is located approximately 1,394 feet north of the Spanish Fork River.
Utah Southern/Union Pacific Railroad (42UT1029/42SL344)	A	This rail line was built between 1871 and 1873 and follows the historic alignment of the Utah Southern Railroad, stretching from the Salt Lake Valley to Utah Valley. The rail line occurs within the I-15 Corridor in 13 locations: five segments of the rail line cross beneath I-15, seven segments cross auxiliary roads and one segment parallels the I-15 Corridor near Point of the Mountain.

Table 4-2: Archaeological Resources - continued

Resource (Site #)	NRHP Criteria	Location / Description
Provo Viaduct (UDOT Structure # D-413)	A, C	The Provo Viaduct is located on Center Street in Provo and spans the D&RGW Railroad and Utah Southern Railroad/Union Pacific Railroad east of the I-15 overpass of Center Street. The viaduct originally was built in 1937 in the vernacular Art Deco style with period revival elements.
Lake Bottom Canal (42UT1032)	A	The canal was built in 1856 or 1857 and has one of the earliest water rights on the Provo River. Six segments of the Lake Bottom Canal lie within the project study area between Center Street in Provo and the proposed 800 South Interchange in Orem. The canal parallels the highway, crossing beneath it once, from east to west, north of 820 North in Provo, and crosses under nine auxiliary roads.
West Union Canal (42UT1568)	A	Construction of the West Union Canal began in 1872 and was completed around 1876; the year water first was diverted into the canal. This canal has some of the oldest water rights on the Provo River (Mead 1903). The canal is located 450 feet north of 400 South in Orem and parallels I-15 for 550 feet before being piped west under I-15. West of I-15, the canal re-emerges 800 feet north of 400 South in Orem.
Salt Lake & Western Railroad Grade (42UT948)	A	This historic property consists of a segment of the old Salt Lake & Western Railroad grade and is located near 2700 North in Lehi. The rail line originated north of Lehi and extended to the mining town of Ironton, a distance of more than 50 miles.
Murdock Canal (42UT947)	A	The Murdock Canal was constructed around 1909 or 1910. Originally named the Provo Reservoir Canal, it was renamed in the 1930s when it was expanded as part of the Deer Creek Reservoir project. The Murdock Canal currently crosses underneath I-15 in a culvert approximately 2,700 feet north of the proposed North Lehi Interchange.
Draper Irrigation Canal (42SL350)	A	The Draper Irrigation Company was formed in 1880 to bring irrigation water to the Draper and Sandy, Utah, areas. A segment of a lateral of the Draper Irrigation Canal passes under I-15 in a culvert at 14600 South in Draper.
East Jordan Canal (42SL290)	A	The East Jordan Canal was constructed in the late 19th century to transport water from the Jordan River to agricultural fields lying along alluvial terraces at the base of the Wasatch Front in eastern Salt Lake County (Polk et al. 1994). The canal crosses under I-15 in Draper, near 14200 South.
Jordan and Salt Lake City Canal (42SL214)	A	The Jordan and Salt Lake City Canal, obtaining its water from the Jordan River, was constructed between 1879 and 1882 (Mead 1903). This 200-foot segment of the Jordan & Salt Lake City Canal passes under Bangerter Highway approximately 1,300 feet west of I-15.

Source: Jones & Stokes 2007

#### 4.4.2.2 Architectural Resources

The fifty-four architectural resources eligible for protection under Section 4(f) are described in Table 4-3. A building reference number is provided for each resource that can be used as a quick reference in the tables and maps; Figures 4-2 and 4-3 provide a general location of the architectural resources in relation to the I-15 Corridor. In addition, Appendix C contains figures that show the architectural resources in relationship to the Proposed Action.

Table 4-3: Architectural Resources

Building Reference #	Address	NRHP Criteria	Description
02	192 South 800 West, Payson	A	A circa-1950, Minimal Traditional-style residence
04	750 West 100 South, Payson	A	A circa-1955, ranch-style residence
08	640 West Utah Avenue, Payson	A	A circa-1920, Craftsman Bungalow-style residence
12	412 West 400 North, Payson	A	A circa-1910, Victorian Gothic-style residence
13	625 North Main, Payson	A	A circa-1950, early ranch-style residence
15	7658 South 1600 West, Spanish Fork	A, C	A circa-1890, Victorian Eclectic-style residence
16	1378 West 7300 South, Spanish Fork	A	A circa-1890, Victorian Eclectic-style residence
17	Approximately 572 West 6800 South, Spanish Fork	A	A circa-1920, utilitarian/other-style industrial building
19	1100 South 500 West, Provo	A	A circa-1950, Minimal Traditional-style residence
20	605 West 1020 South, Provo	A	A circa-1950, early ranch-style, postwar-era residence
21	627 South 1100 West, Provo	A	A circa-1948, Minimal Traditional-style residence
22	987 West 600 South, Provo	A, C	A circa-1940, Minimal Traditional-style residence
24	1200 West Center, Provo	A	A circa-1930, 20 <sup>th</sup> -century commercial building
25	702 North Geneva Road, Provo	A, C	A circa-1900, Victorian Eclectic-style residence
26	722 North Geneva Road, Provo	A	A circa-1935, Minimal Traditional-style residence
27	768 North Geneva Road, Provo	A	A circa-1910, Victorian Eclectic/Greek Revival-style residence
28	856 North Geneva Road, Provo	A	A circa-1945, Minimal Traditional-style residence
30	530 West 2000 South, Provo	A	A circa-1940, International-style industrial building
31	1271 West University Parkway, Orem	A	A circa-1940, dairy agricultural building

Source: Jones & Stokes 2007 unless otherwise noted.

Table 4-3: Architectural Resources – continued

Building Reference #	Address	NRHP Criteria	Description
31.5	895 South Geneva Road, Orem <sup>1</sup>	A	A circa-1900 Victorian Eclectic Cross-wing –style residence
32	865 South Geneva Road, Orem	A	A circa-1955, early ranch–style residence
33	853 (849) South Geneva Road, Orem	A	A circa-1955, early ranch–style residence
34	1467 West 800 South, Orem	A	A circa-1950, early ranch–style residence
34.5	1451 West 800 South, Orem <sup>1</sup>	A	A circa-1950, early ranch–style residence
43	1545 West 800 North, Orem	A	A circa-1925, Craftsman Bungalow–style residence
46	485 South 100 East, American Fork	A	A circa-1940, Minimal Traditional–style residence
47	440 South 100 East, American Fork	A, C	A circa-1960, ranch-style residence
48	345 South Center, American Fork	A	A circa-1910, Greek Revival–style residence
50	150 West 300 South, American Fork	A	A circa-1945, 20 <sup>th</sup> -century commercial building
51	262 South 100 West, American Fork	A	A circa-1920, Craftsman Bungalow–style residence
54	159 W. 200 S., American Fork	A, C	A circa-1915, Craftsman Bungalow-Prairie school
55	187 West 200 South, American Fork	A	A circa-1935, Minimal Traditional–style residence
56	360 West 200 South, American Fork	A	A circa-1930, 20 <sup>th</sup> century/other–style residence
57	104 Roosevelt, American Fork	A, C	A circa-1940, Minimal Traditional–style residence
58	447 Harrison Avenue, American Fork	A	A circa-1940, Minimal Traditional–style residence
62.5	7122 (7110) West 7750 North, American Fork <sup>2</sup>	A	A circa-1955, ranch-style residence
63	1028 West Main Street, American Fork	A	A circa-1940, English cottage–style residence
63.5	35 North 1020 West, American Fork <sup>2</sup>	A	A circa-1960, ranch-style residence

Source: Jones & Stokes 2007 unless otherwise noted.

Notes:

<sup>1</sup> Selective Reconnaissance Survey, Lake Bottom Area (Geneva Road), Utah County, Utah (Calkins 2003)

<sup>2</sup> Identified in the Archaeological, Architectural, and Paleontological Assessment of the Proposed East-West Connector Survey Area, Utah County, Utah (SWCA Environmental Consultants 2007).

Table 4-3: Architectural Resources – continued

Building Reference #	Address	NRHP Criteria	Description
63.7	57 North 1020 West, American Fork <sup>2</sup>	A, C	A circa-1960, ranch-style residence
63.9	8040 North Millpond Drive, Lehi <sup>2</sup>	A	A circa-1920, Victorian Eclectic-style commercial building
64	1220 East Main Street, Lehi	A	A circa-1950, Streamline Moderne/International-style commercial building
65	700 E. Main Street, Lehi	A, C	The Lehi Roller Mill is a circa-1905 flour mill agricultural building. This historic mill was listed on the NRHP in 1994 under criteria A and C.
66	250 North 950 East, Lehi	A	A circa-1960, split level-style residence
68	725 East 500 North, Lehi	A, C	A circa-1850, settlement cabin-style, settlement-era residence
70	825 North 400 East, Lehi	A	A circa-1940, Minimal Traditional-style residence
74	830 West State Street, Lehi	A	A circa-1910, Craftsman Bungalow-style residence
75	850 West State Street, Lehi	A	A circa-1935, Minimal Traditional-style residence
77	980 West State Street, Lehi	A	A circa-1890, Classical/other-style residence
81	1060 West State Street, Lehi	A	A circa-1940, Minimal Traditional-style residence
82	1070 West State Street, Lehi	A	A circa-1915, Minimal Traditional-style residence
83	2200 North 1100 West, Lehi	A	A circa-1942, industrial building
84	2760 North Frontage Road, Lehi	A, C	A circa-1960, industrial building
85	4175 Thanksgiving Way, Lehi	A, C	A circa-1930, Streamline Moderne-style commercial building
86	4275 Thanksgiving Way, Lehi	A	A circa-1930, International-style commercial building

Source: Jones & Stokes 2007 unless otherwise noted.

Notes:

<sup>2</sup> Identified in the Archaeological, Architectural, and Paleontological Assessment of the Proposed East-West Connector Survey Area, Utah County, Utah (SWCA Environmental Consultants 2007).

## 4.5 Use of Section 4(f) Resources

The definitions of use under Section 4(f) are provided in the “Regulatory Setting” of this evaluation. Alternative 1 (No Build) would not result in a use of any Section 4(f) resources.

#### 4.5.1 Recreation Resources

As summarized in Table 4-4, implementation of the Proposed Action would not require a Section 4(f) use of any of the 23 recreation resources located within one-quarter mile of the I-15 Corridor.

Table 4-4: Section 4(f) Use of Recreation Resources

Resource and Location	Section 4(f) Use	Description of Section 4(f) Use
Hillman Fields 800 West 800 South, Payson	No use	The park is located approximately 1,267 feet east of the I-15 Corridor.
Pioneer Square 439 West Utah Avenue, Payson	No use	The park is located approximately 1,267 feet east of the I-15 Corridor.
North Park 507 East 1000 North, Spanish Fork	No use	The park is located approximately 528 feet east of the I-15 Corridor.
East Bay Golf Course 1860 South 380 East, Provo	No use	The golf course is located immediately east of the I-15 Corridor. Implementation of the Proposed Action would not require the use of land from the golf course.
Powerline Park #1 500 West 1400 South, Provo	No use	The park is located immediately west of the I-15 Corridor. However, the Proposed Action would not require the use of land from this park.
Sunset View Park 525 South 1600 West, Provo	No use	The park is located approximately 739 feet west of the I-15 Corridor.
West Park 1700 West 100 North, Provo	No use	The park is located more than 264 feet west of the I-15 Corridor.
Fort Utah Park 200 North Geneva Road, Provo	No use	The park is located approximately 634 feet west of the I-15 Corridor.
Provo River Parkway Trail Utah Lake State Park in Provo to Vivian Park in Provo Canyon	No use	A temporary occupancy of the trail would occur during widening and reconstruction of the two existing bridges that span the trail and Provo River near 400 North in Provo. A detour would be provided for trail users during construction to ensure its uninterrupted use.
Geneva Road Trailhead 350 North Geneva Road, Provo	No use	The trailhead is located approximately 1,162 feet west of the I-15 Corridor.
Paul Ream Wilderness Park 1600 West 500 North, Provo	No use	The park is located approximately 845 feet east of the I-15 Corridor.
Harbor Park 800 North 2450 West, Provo	No use	The park is located 1,320 feet west of the I-15 Corridor
Nielsen's Grove 2000 South Sandhill Road, Orem	No use	Nielsen's Grove is located approximately 370 feet east of the I-15 Corridor.
Orem City Skate Park 355 N 1200 West, Orem	No use	The skate park is located immediately east of the I-15 Corridor. Implementation of the Proposed Action would not require the use of land from the skate park.
Greenwood Park 500 South 200 East, American Fork	No use	The park is located immediately east of the I-15 Corridor. Implementation of the Proposed Action would not require the use of land from the park.

Table 4-4: Section 4(f) Use of Recreation Resources - continued

Resource and Location	Section 4(f) Use	Description of Section 4(f) Use
Rotary Park 400 South 200 East, American Fork	No use	The park is located approximately 845 feet east of the I-15 Corridor.
Lions Park 100 South 300 West, American Fork	No use	The park is located approximately 528 feet east of the I-15 Corridor.
Margaret Wines Park 500 North Center Street, Lehi	No use	The park is located 1,320 feet west of the I-15 Corridor.
Bandwagon Park 900 North 200 West, Lehi	No use	The park is located approximately 1,056 feet west of the I-15 Corridor.
Dry Creek Trail Park 100 West 1500 North, Lehi	No use	The park is approximately 950 feet east of the I-15 Corridor.
North Entrance Park 1875 North Trinnaman Lane, Lehi	No use	The park is located approximately 370 feet west of the I-15 Corridor.
Pilgrims Landing Park 3000 West Pilgrims Loop Road, Lehi	No use	The park is located approximately 1,056 feet west of the I-15 Corridor.

#### 4.5.1.1 Direct Use

As shown in Table 4-4, the implementation of the Proposed Action would not require a direct use of any of the recreation resources. However, a temporary occupancy of the Provo River Parkway Trail would be required during reconstruction of the two bridges that span the trail. The following discussion provides more detail.

#### 4.5.1.2 Temporary Occupancy (Provo River Parkway Trail)

There would be a temporary construction-related occupancy of the Provo River Parkway Trail from the widening and reconstruction of the bridges over the trail located at approximately 400 North in Provo.

The measures described below, to ensure the ongoing functionality of the Provo River Parkway Trail, would meet all of the criteria outlined in 23 CFR 774.13 therefore, the proposed project would not result in a use as defined in 23 CFR 774.17. As defined in the regulations 23 CFR 774.13 a temporary occupancy of land is so minimal that it does not constitute a use within the meaning of Section 4(f) when the following conditions are satisfied:

- Duration must be temporary, i.e. less than the time needed for construction of the project, and there should be no change in ownership of the land;
- Scope of work must be minor, i.e., both the nature and magnitude of the changes to the Section 4(f) property are minimal;
- There are no anticipated permanent adverse physical impacts, nor will there be interference with the protected activities, features or attributes of the property, on either a temporary or permanent basis;
- The land being used must be fully restored, i.e. the property must be returned to a condition that is at least as good as that which existed prior to the Project; and,



- There must be documented agreement of the official(s) having jurisdiction over the Section 4(f) resource regarding the above conditions.

At this location, the trail and Provo River cross beneath I-15, with the trail on the south bank of the river. Recreational use of the existing trail at this location would be interrupted on a temporary basis during reconstruction of the bridges; however, a detour would be available for trail users at all times during this period to ensure uninterrupted use of the trail.

Potential detour routes for trail users to cross the I-15 Corridor and railroad tracks include 820 North or Center Street in Provo. The potential detour routes are shown on Figure 4-4 and would begin where Independence Avenue currently crosses the Provo River east of I-15 and at the Geneva Road Trailhead, an access point for the Provo River Parkway Trail west of I-15. Signage would be posted along the trail to inform users of the detour schedules and routes. After construction has been completed, the trail would be restored to its original condition or better. Impacts on the trail are expected to be minor and would affect only a short segment, approximately 125 to 150 feet of the 15-mile-long trail. The section of Provo River Parkway Trail directly beneath I-15 would not be accessible during the reconstruction and widening of the bridges that span the trail. Once construction in this area is complete, access to this section of the trail would be restored. The proposed detour would allow for uninterrupted use of the trail during construction; it would not affect enjoyment of the trail or adversely affect the activities, features, or attributes that qualify the trail for protection under Section 4(f).

Coordination with Provo City, which has jurisdiction over this portion of the Provo River Parkway Trail, has been ongoing during development of the project. Provo City agreed that the assertions presented above would not adversely affect the ongoing functionality of the Provo River Parkway Trail for recreational use during the widening and reconstruction of I-15. The trail's administrator concurred in a letter dated May 1, 2008 (Appendix A). Implementation of the Proposed Action would not require a temporary occupancy from the other 22 recreation resources.



0 0.125 0.25 0.5 Miles

Figure 4-4

Potential Detours - Provo River Parkway Trail

LEGEND:



Parks

--- 820 North Detour Route

— Provo River Parkway Trail

--- Center Street Detour Route



Data Source: NAIP, 2006; Utah County, 2007; and Jones & Stokes, 2007.



#### 4.5.1.3 Constructive Use

Implementation of the Proposed Action would not result in a constructive use of the recreation resources listed in Table 4-4, as demonstrated below.

##### *Noise*

Parks along the I-15 Corridor are not noise-sensitive facilities where quiet and serenity are significant attributes; however, they would qualify as Activity Category B resources under FHWA guidelines and the National Ambient Noise Criteria. Activity Category B includes areas such as picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals. Noise from traffic on I-15 is an existing condition along the corridor and does not interfere with the use of the parks or the Provo River Parkway Trail. Recreation use along the Provo River Parkway Trail consists of activities that are transitory in nature (e.g., walking, bike riding, skating), and it is expected that an increase of the existing noise levels in this area would not substantially impair the recreation use or enjoyment of the Provo River Parkway Trail. The existing noise environment along the I-15 Corridor is described in Section 3.7 of this EIS. As described in Section 3.7, noise levels are predicted to increase to a level considered an impact, as established in the UDOT Noise Abatement Policy. Although this expected increase may be considered a noise impact, it would not be considered a constructive use (as defined in 23 CFR 774.15 of the recreation resources because these noise levels would not substantially interfere with the use and enjoyment of the parks or the Provo River Parkway Trail for their intended purposes. Noise impacts and proposed noise abatement also are addressed in Section 3.7. There would be no constructive use attributable to noise.

##### *Aesthetics*

I-15 is an existing element of the visual setting along the I-15 Corridor. Views in the direction of the highway could change as a result of the proposed widening and reconstruction of I-15, including the construction of noise barriers in areas where a noise impact has been identified and where noise barriers are feasible and prudent. However, in areas where noise barriers will not be constructed, the proposed project would have features similar to those that currently exist.

Parks immediately adjacent to I-15 or with a direct view of the highway include North Park in Spanish Fork, East Bay Golf Course in Provo, Nielsen's Grove in Orem, Orem City Skate Park, Greenwood Park and Bicentennial Park in American Fork, and North Entrance Park in Lehi. In addition, the Provo River Parkway Trail crosses underneath I-15 at approximately 400 North in Provo. These parks and the Provo River Parkway Trail are not areas where the value of the park or the Provo River Parkway Trail is substantially derived from the setting. The change in the visual setting from the widening and reconstruction of I-15 is not expected to detract from the use and enjoyment of these parks, the Provo River Parkway Trail, or recreation facilities for their intended purpose. Existing buildings and vegetation obstruct (partly or entirely) direct views toward I-15 for the remaining parks within one-quarter mile of the highway. Powerline Park #1 is immediately adjacent to I-15 on the west, and an existing noise barrier separates the park from I-15 in this area. The noise barrier would be replaced, and views in this area would be similar to existing conditions. There may be some minor visual impacts during construction of the new bridge for trail users on the Provo River Parkway Trail, immediately adjacent to the where the trail crosses underneath the I-15 Corridor. These impacts would be temporary in nature, and after reconstruction, the proposed project would have features similar to the existing conditions, which would not detract from the overall setting of the Provo River Parkway Trail. Given the considerations described above, there would be no constructive use attributable to visual impacts.

##### *Vibration*

Increased vibration levels would occur during the construction period; however, the vibration levels are not expected to be great enough to affect the structural integrity or diminish the utility of buildings or facilities located within the boundaries of the parks along the I-15 Corridor, including the Provo River Parkway Trail. I-15 widening and reconstruction would be performed in accordance with UDOT Standard Specification 01355, which addresses monitoring of vibration during construction. In the unlikely event that vibration during construction causes damage to buildings or facilities in the parks, the damage would be repaired and use of the resource would not be permanently or severely diminished. There would be no constructive use as a result of vibration.

### *Access*

Access to recreation resources would not change or be restricted as a result of the implementation of the Proposed Action, and there would be no constructive use due to changes in access.

### *Ecological Intrusion*

There would be no constructive use attributable to ecological intrusion as a result of the implementation of the Proposed Action. No wildlife or waterfowl refuges are located within one-quarter mile of I-15.

#### 4.5.1.4 Section 6(f) Resources

As described in Section 4.5.1, Hillman Fields at 800 West 800 South in Payson and North Park at 507 East 1000 North in Spanish Fork are several hundred feet from the I-15 corridor. No property from these parks will be converted to a non-recreational use and therefore, no replacement lands are necessary. The segments of the Provo River Parkway Trail that are subject to Section 6(f) protection are not located near I-15 and there would be no right-of-way required for the Proposed Action. No further Section 6(f) analysis or correspondence is required for these resources.

#### 4.5.2 Historic Properties

The Section 4(f) uses of archaeological and architectural resources are described in the following sections. The summaries provided below include results of all Utah SHPO consultation that has occurred during preparation of the FEIS.

Changes have been made to this Section 4(f) evaluation since the DEIS was published in November 2007. These changes were made for the following reasons:

- Potential changes to the North Payson interchange design may shift the location of the crossing of the Denver & Rio Grande Western Railroad in this location.
- The NRHP eligibility has changed for two properties in Orem, 1260 West 800 South (Building Reference #36) and 12 South 1160 West (Building Reference #39) from eligible to not eligible. Therefore, these two structures no longer qualify for protection under Section 4(f).
- Design elements of Provo/Orem Option D have changed from that presented in the DEIS. Re-alignment of Provo 820 North would change the finding for 702 North Geneva Road from no use to a *de minimis* use of 0.05 acres. The re-alignment also resulted in additional crossings of the Denver & Rio Grande Western Railroad, the Utah Southern Railroad/Union Pacific Railroad, and the Lake Bottom Canal. See Sections 4.5.2.1 and 4.5.2.2.
- Design elements at 1200 West in Lehi have been refined. These refinements have changed the use of an historic property. The direct use at 2200 North 1100 West (Building Reference #83) has changed from 2.43 acres to 2.8 acres.
- Additional consultation with Utah SHPO has occurred, as described in Sections 4.4.2 and 4.7.
- Since publication of the DEIS, Alternative 4 with Provo/Orem Option D and American Fork Option C has been identified as the Preferred Alternative.

##### 4.5.2.1 Archaeological Resources

The Section 4(f) uses of the 12 archaeological resources that would result from the implementation of the Proposed Action are described in Table 4-5. Table 4-5 has been updated to reflect changes to the use of the archaeological resources since publication of the DEIS.

Table 4-5: Description of Section 4(f) Use to Archaeological Resources

Resource (Site #)	NHPA Section 106 Effect	Section 4(f) Use	Description of Section 4(f) Use
Denver & Rio Grande Western Railroad (42UT1101/42SL293)	No Adverse Effect	Direct Use, <i>de minimis</i>	I-15 crosses the rail line either at-grade or at grade-separated crossings. Widening I-15 would affect approximately 675 linear feet of the rail line. Implementation of Provo/Orem Options A, B, C, and D would affect approximately 1,175, 950, 1,050, and 1,141 linear feet, respectively. American Fork Main Street Options A, B, and C would affect approximately 90, 325, and 90 linear feet, respectively. Improving the existing crossings or construction of new crossings, at-grade or grade-separated, would not damage or alter the alignment or characteristics that contribute to the rail line's significance or eligibility for listing on the NRHP under criterion A.
South Field Canal (42UT935)	No Adverse Effect	Direct Use, <i>de minimis</i>	Widening I-15 would require an extension of the existing culvert, which would cover portions of the canal in the right-of-way. Extension of the existing culvert by 25 linear feet would not alter the character-defining features of the canal that contribute to its eligibility for listing on the NRHP under criteria A and C.
Mill Race Canal (42UT1485)	No Adverse Effect	Direct Use, <i>de minimis</i>	Widening I-15 would require an extension of the existing culverts at two locations, which would cover portions of each segment of canal in the right-of-way. The canal within the right-of-way in both locations is enclosed in culverts that would be widened by a total of 25 linear feet. Extension of these existing culverts would not alter the character-defining features of the canal that contribute to eligibility for listing on the NRHP under criterion A.
Utah Southern Railroad/Union Pacific Railroad (42UT1029/42SL344)	No Adverse Effect	Direct Use, <i>de minimis</i>	I-15 crosses the rail line either at-grade or at grade-separated crossings in five locations, and in seven locations auxiliary roads cross the rail line. Widening I-15 would affect approximately 2,225 linear feet of the rail line. Based on construction of Provo/Orem Options A, B, C, and D, these crossings would affect 1,425, 1,150, 1,125, and 1,016 linear feet, respectively, of the rail line. Improving the existing crossings or constructing new crossings, at-grade or grade-separated, would not diminish the qualities that qualify the rail line for listing on the NRHP under criterion A. The primary contributing elements of the rail line as a whole would not be affected.
Provo Viaduct (UDOT Structure D-413)	Adverse Effect	Direct Use, not <i>de minimis</i>	The construction of Provo/Orem Options A, B, C, and D all would require demolition of the viaduct (1,442 feet long) to construct the Provo Center Street Interchange. The two-lane viaduct located on Center Street in Provo was previously determined eligible for listing on the NRHP under criteria A and C. In addition, the viaduct was deemed structurally deficient and functionally obsolete in a bridge survey conducted by UDOT.
Lake Bottom Canal (42UT1032)	No Adverse Effect	Direct Use, <i>de minimis</i>	The construction of Provo/Orem Options A, B, C, and D would require a direct use of approximately 1,550, 1,775, 1,000, and 516 linear feet, respectively, of the canal present in the right-of-way by widening existing culverts or by enclosing portions of the canal in the right-of-way. Widening the existing culverts or enclosing portions of the canal would not alter the character-defining features of the canal as a whole that contribute to its eligibility for listing on the NRHP under criterion A.

 Shaded row indicates an Adverse Effect and Section 4(f) Direct Use (not *de minimis*).

Table 4-5: Description of Section 4(f) Use to Archaeological Resources - continued

Resource (Site #)	NHPA Section 106 Effect	Section 4(f) Use	Description of Section 4(f) Use
West Union Canal (42UT1568)	No Adverse Effect	Direct Use, <i>de minimis</i>	Widening I-15 would require an extension of the existing culvert within the right-of-way by approximately 25 linear feet, which would cover a portion of the canal in the right-of-way, but would not alter the character-defining features of the canal that make it eligible for listing on the NRHP under criterion A.
Salt Lake and Western Railroad Grade (42UT948)	No Adverse Effect	Direct Use, <i>de minimis</i>	This approximately 150-foot segment of railroad grade is located within the existing I-15 right-of-way, although there is no evidence of the railroad grade west of I-15. The segment is highly degraded and lacks integrity of eligibility-defining characteristics, and it does not contribute to the overall eligibility of this historic property. However, a direct use of approximately 50 linear feet of this segment would be required to widen I-15 where it occurs within the right-of-way.
Murdock Canal (42UT947)	No Adverse Effect	Direct Use, <i>de minimis</i>	The segment of the canal in the right-of-way is contained within an existing culvert, and widening I-15 would require an extension of the culvert in the right-of-way. I-15 would be widened by 100 feet on the east side of I-15 in this area. There are no open segments of canal or any canal features associated with this segment. This segment of canal has lost all integrity of design, location, setting, materials, workmanship, feeling, and association. This segment does not contribute to the overall eligibility of the Murdock Canal for listing on the NRHP under criterion A.
Draper Irrigation Canal (42SL350)	No Adverse Effect	Direct Use, <i>de minimis</i>	This segment of canal is contained in an existing culvert; widening I-15 would require an extension of the culvert in the right-of-way by approximately 50 linear feet, but would not alter the character-defining features of the canal that make it eligible for listing on the NRHP under criterion A.
East Jordan Canal (42SL290)	No Adverse Effect	Direct Use, <i>de minimis</i>	Widening I-15 would require widening the existing concrete bridge by approximately 50 linear feet over the canal, but would not alter the character-defining features of the canal that contribute to its eligibility for listing on the NRHP under criterion A.
Jordan and Salt Lake City Canal (42SL214)	No Adverse Effect	Direct Use, <i>de minimis</i>	The segment of the canal recorded within the survey area does not cross I-15. The canal parallels I-15 and crosses under Bangerter Highway in a box culvert approximately 1,300 feet west of I-15. Improvements proposed for the Bangerter Highway Interchange include a detention basin south of the highway and 25 feet east of the canal. The detention basin would outlet to the canal and require modifications to the canal wall, but it would not alter character-defining features of the canal that contribute to its eligibility for listing on the NRHP under criterion A.

Source: Jones & Stokes 2007

Note: The terms *adverse effect* and *no adverse effect* are taken from NHPA Section 106 determinations; see Section 3.16 of this EIS.

### Direct Use

As shown in Table 4-5, the implementation of the Proposed Action would require a direct use (not *de minimis*) of one archaeological resource, the Provo Viaduct located on Center Street. In addition, there would be a direct use (*de minimis*) of eleven archaeological resources that would result in a Section 106 determination of no adverse effect. UDOT and FHWA have determined that the use of these archaeological resources meets the criteria and requirements for a *de minimis* use finding, as specified in SAFETEA-LU Section 6009(a). FHWA has informed the Utah SHPO of FHWA's intent to make a *de minimis* impact finding based on the Utah SHPO's written concurrence in the NHPA Section 106 determination. FHWA has considered the views of any consulting parties participating in the Section 106 consultation before making a finding of *de minimis* use.

### Temporary Occupancy

The implementation of the Proposed Action would not require a temporary occupancy of the 12 archaeological resources.

### Constructive Use

The construction of the Proposed Action would require a direct use of 12 archaeological resources (11 *de minimis* and one not *de minimis*). Constructive use does not occur when the transportation project requires a direct use of a Section 4(f) resource (23 CFR 774.15). In addition, constructive use does not occur when the process required by NHPA Section 106 results in an agreement of either no effect or no adverse effect (23 CFR 774.15). Therefore, there would be no constructive use of these resources.

#### 4.5.2.2 Architectural Resources (Historic Buildings)

The Section 4(f) uses of the architectural resources resulting from the implementation of the Proposed Action are described in Table 4-6 which includes a Building Reference number (shown on figures), address, and the NHPA and Section 4(f) uses. The table also includes description of the Section 4(f) use and which Provo/Orem options would use the resources, if any. In addition, the location of each architectural resource (historic building) is shown on the figures in Appendix C in relationship to the alternatives and Proposed Action. Table 4-6 has been updated to reflect changes to the use of the architectural resources since publication of the DEIS.

Table 4-6: Description of Section 4(f) Uses to Architectural Resources

Building Reference # (Figure # in Appendix C)	Address	NHPA Section 106 Effect	Section 4(f) Use	Description of Section 4(f) Use
2 (Figure C-1)	192 South 800 West, Payson	No Effect	No Use	No impact on building or parcel.
4 (Figure C-1)	750 West 100 South, Payson	No Effect	No Use	No impact on building or parcel.
8 (Figure C-1)	640 West Utah Avenue, Payson	No Effect	No Use	No impact on building or parcel.
12 (Figure C-2)	412 West 400 North, Payson	No Effect	No Use	No impact on building or parcel.
13 (Figure C-2)	625 North Main, Payson	No Effect	No Use	No impact on building or parcel.
15 (Figure C-3)	7658 South 1600 West, Spanish Fork	No Effect	No Use	No impact on building or parcel.

Source: Jones & Stokes 2007

Table 4-6: Description of Section 4(f) Uses to Architectural Resources - continued

Building Reference # (Figure # in Appendix C)	Address	NHPA Section 106 Effect	Section 4(f) Use	Description of Section 4(f) Use
16 (Figure C-3)	1378 West 7300 South, Spanish Fork	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of the Proposed Action would require a direct use of 0.24 acres of the 3.1-acre parcel on which this building is located, but there would be no effect on the building.
17 (Figure C-3)	Approximately 572 West 6800 South, Spanish Fork	No Effect	No Use	No impact on building or parcel.
19 (Figure C-4)	1100 South 500 West, Provo	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of the Proposed Action would require a direct use of 0.006 acres of this 0.3-acre parcel, but there would be no effect on the building.
20 (Figure C-4)	605 West 1020 South, Provo	No Effect	No Use	No impact on building or parcel.
21 (Figure C-4)	627 South 1100 West, Provo	No Effect	No Use	No impact on building or parcel.
22 (Figure C-4)	987 West 600 South, Provo	No Effect	No Use	No impact on building or parcel.
24 (Figure C-5)	1200 West Center, Provo	No Effect	No Use	No impact on building or parcel.
25 (Figure C-6)	702 North Geneva Road, Provo	No Adverse Effect, Provo/Orem Options A and B	Direct Use, <i>de minimis</i>	Implementation of Provo/Orem Options A and B would require a direct use of 0.23 acres of the 0.54-acre parcel on which this building is located, but there would be no effect on the building.
		No Effect, Provo/Orem Options C	No Use	No impact on building or parcel.
		No Adverse Effect, Provo/Orem Option D*	Direct Use, <i>de minimis</i>	Construction of the 820 North underpass in Provo - components of the revised Option D - would require a direct use of 0.05 acres of the 0.54-acre parcel, but there would be no effect on the building.
26 (Figure C-6)	722 North Geneva Road, Provo	No Effect	No Use	No impact on building or parcel.
27 (Figure C-6)	768 North Geneva Road, Provo	No Effect	No Use	No impact on building or parcel.
28 (Figure C-6)	856 North Geneva Road, Provo	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of Provo/Orem Options A and B would require a direct use of 0.61 acres of this 3.1-acre parcel, but there would be no effect on the building. Implementation of Provo/Orem Options C and D would require 0.023 acres of the parcel.

\*Provo/Orem Option D and American Fork Option C are elements of the Preferred Alternative.

Source: Jones & Stokes 2007

Note: The terms *adverse effect* and *no adverse effect* are taken from NHPA Section 106 determinations; see Section 3.16 of this FEIS.



Table 4-6: Description of Section 4(f) Uses to Architectural Resources - continued

Building Reference # (Figure # in Appendix C)	Address	NHPA Section 106 Effect	Section 4(f) Use	Description of Section 4(f) Use
30 (Figure C-7)	530 West 2000 South, Provo	No Adverse Effect, Provo/Orem Options A and B	Direct Use, <i>de minimis</i>	Implementation of Provo/Orem Options A and B would require a direct use of 0.67 acres of this 15.9-acre parcel, but there would be no effect on the building.
		No Effect, Provo/Orem Options C and D*	No Use	Implementation of Provo/Orem Options C and D would not require a direct use of this parcel, and there would be no Section 4(f) use.
31 (Figure C-8)	1271 West University Parkway, Orem	No Effect	No Use	No impact on building or parcel.
31.5 (Figure C-9)	895 South Geneva Road, Orem	No Effect	No Use	No impact on building or parcel.
32 (Figure C-9)	865 South Geneva Road, Orem	No Effect	No Use	No impact on building or parcel.
33 (Figure C-9)	853 (849) South Geneva Road, Orem	No Effect	No Use	No impact on building or parcel.
34 (Figure C-9)	1467 West 800 South, Orem	No Adverse Effect, Provo/Orem Options A and C	Direct Use, <i>de minimis</i>	Implementation of Provo/Orem Options A and C would require a direct use of 0.14 acres of the 1.04-acre parcel for construction at 800 South in Orem. There would be no effect on the building.
		No Effect, Provo/Orem Options B and D*	No Use	Implementation of Provo/Orem Options B and D would not require a direct use of this parcel or affect the building.
34.5 (Figure C-9)	1451 West 800 South, Orem	No Adverse Effect, Provo/Orem Options A and C	Direct Use, <i>de minimis</i>	Implementation of Provo/Orem Options A and C require a direct use of 0.23 acres from the 1.04-acre parcel for construction at 800 South in Orem. There would be no effect on the building.
		No Effect, Provo/Orem Options B and D*	No Use	Implementation of Provo/Orem Options B and D would not require a direct use of this parcel or affect the building.
43 (Figure C-10)	1545 West 800 North, Orem	No Effect	No Use	No impact on building or parcel.
46 (Figure C-11, C-12, & C-13)	485 South 100 East, American Fork	No Effect	No Use	No impact on building or parcel.

\*Provo/Orem Option D and American Fork Option C are elements of the Preferred Alternative.

Source: Jones & Stokes 2007

Note: The terms *adverse effect* and *no adverse effect* are taken from NHPA Section 106 determinations; see Section 3.16 of this FEIS.

Table 4-6: Description of Section 4(f) Uses to Architectural Resources - continued

Building Reference # (Figure # in Appendix C)	Address	NHPA Section 106 Effect	Section 4(f) Use	Description of Section 4(f) Use
47 (Figure C-11, C-12, & C-13)	440 South 100 East, American Fork	No Effect	No Use	No impact on building or parcel.
48 (Figure C-11, C-12, & C-13)	345 South Center, American Fork	No Effect	No Use	No impact on building or parcel.
50 (Figure C-11, C-12, & C-13)	150 West 300 South, American Fork	Adverse Effect	Direct Use, not <i>de minimis</i>	Construction of American Fork Main Street Options A, B, or C* would require a direct use of the 0.34-acre parcel, and the building would be demolished.
51 (Figure C-11, C-12, & C-13)	262 South 100 West, American Fork	No Effect	No Use	No impact on building or parcel.
54 (Figure C-11, C-12, & C-13)	159 West 200 South, American Fork	No Effect	No Use	No impact on building or parcel.
55 (Figure C-11, C-12, & C-13)	187 West 200 South, American Fork	No Effect	No Use	No impact on building or parcel.
56 (Figure C-11, C-12, & C-13)	360 West 200 South, American Fork	Adverse effect	Direct Use, not <i>de minimis</i>	Construction of American Fork Main Street Options A, B, or C* would require a direct use of the 0.7-acre parcel, and the building would be demolished.
57 (Figure C-14, C-15, & C-16)	104 Roosevelt, American Fork	No Adverse Effect	No Use	A temporary occupancy would be required for a construction easement. Construction of American Fork Main Street Options A, B, or C would require a temporary occupancy of 0.04 acres of this 0.22-acre parcel for a construction easement. There would be no effect on the building, and the land would be restored to its original condition or better.
58 (Figure C-14, C-15, & C-16)	447 Harrison Avenue, American Fork	No Effect	No Use	No impact on building or parcel.

\*Provo/Orem Option D and American Fork Option C are elements of the Preferred Alternative.

Source: Jones & Stokes 2007

Note: The terms *adverse effect* and *no adverse effect* are taken from NHPA Section 106 determinations; see Section 3.16 of this FEIS.

 Shaded rows indicate an Adverse Effect and Section 4(f) Direct Use (not *de minimis*).

Table 4-6: Description of Section 4(f) Uses to Architectural Resources - continued

Building Reference # (Figure # in Appendix C)	Address	NHPA Section 106 Effect	Section 4(f) Use	Description of Section 4(f) Use
62.5 <sup>1</sup> (Figure C-17)	7122 (7110) West 7750 North, American Fork	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of American Fork Main Street Option B would require a direct use of 1.58 acres of this 2.9-acre parcel, but there would be no effect on the building.
		No Effect	No Use	Implementation of American Fork Main Street Options A and C would not require a direct use of this parcel or affect the building.
63 (Figure C-17)	1028 West Main Street, American Fork	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of American Fork Main Street Option A would require a direct use of 1.31 acres of this 18.7-acre parcel, but there would be no effect on the building. Options B and C would require a direct use of 1.16 acres, but there would be no effect on the building.
63.5 <sup>1</sup> (Figure C-17)	35 North 1020 West, American Fork	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of American Fork Main Street Option A would require a direct use of 0.02 acres of this 1.0-acre parcel, but there would be no effect on the building.
		No Effect	No Use	Implementation of American Fork Main Street Options B and C would not require a direct use of this parcel or affect the building.
63.7 <sup>1</sup> (Figure C-17)	57 North 1020 West, American Fork	No Effect	No Use	No impact on building or parcel.
63.9 <sup>1</sup> (Figure C-17)	8040 North Millpond Drive, Lehi	No Effect	No Use	No impact on building or parcel.
64 (Figure C-18, C-19, & C-20)	1220 East Main Street, Lehi	No Effect	No Use	No impact on building or parcel.
65 (Figure C-18, C-19, & C-20)	700 East Main Street, Lehi	No Effect	No Use	No impact on building or parcel.
66 (Figure C-18, C-19, & C-20)	250 North 950 East, Lehi	No Effect	No Use	No impact on building or parcel.
68 (Figure C-18, C-19, & C-20)	725 East 500 North, Lehi	No Effect	No Use	No impact on building or parcel.
70 (Figure C-21)	825 North 400 East, Lehi	No Effect	No Use	No impact on building or parcel.

Source: Jones & Stokes 2007

Note: The terms *adverse effect* and *no adverse effect* are taken from NHPA Section 106 determinations; see Section 3.16 of this FEIS.

<sup>1</sup> These properties and their Section 106 effect were included in the November 2007 addendum DOE/FOE as explained in Section 4.4.2.

Table 4-6: Description of Section 4(f) Uses to Architectural Resources - continued

Building Reference # (Figure # in Appendix C)	Address	NHPA Section 106 Effect	Section 4(f) Use	Description of Section 4(f) Use
74 (Figure C-22)	830 West State Street, Lehi	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of the Proposed Action would require a direct use of 0.025 acres of this 0.30-acre parcel, but there would be no effect on the building.  In addition, 0.078 acres would be required temporarily during construction. There would be no effect on the building, and the land would be restored to its original condition or better.
75 (Figure C-22)	850 West State Street, Lehi	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of the Proposed Action would require a direct use of 0.028 acres of this 0.54-acre parcel, but there would be no effect on the building.  In addition, 0.10 acre would be required temporarily during construction. There would be no effect on the building, and the land would be restored to its original condition or better.
77 (Figure C-22)	980 West State Street, Lehi	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of the Proposed Action would require a direct use of 0.08 acres of this 2.3-acre parcel, but there would be no effect on the building.  An additional 0.24 acres would be required on a temporary basis during construction. There would be no effect on the building, and the land would be restored to its original condition or better.
81 (Figure C-22)	1060 West State Street, Lehi	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of the Proposed Action would require a direct use of 0.02 acres of this 0.23-acre parcel, but there would be no effect on the building.
82 (Figure C-22)	1070 West State Street, Lehi	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of the Proposed Action would require a direct use of 0.02 acres of the 0.27-acre parcel, but there would be no effect on the building.
83 (Figure C-22)	2200 North 1100 West, Lehi	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of the Proposed Action would require a direct use of 2.8 acres of this 18.9-acre parcel, but there would be no effect on the building.

Source: Jones & Stokes 2007

Note: The terms *adverse effect* and *no adverse effect* are taken from NHPA Section 106 determinations; see Section 3.16 of this FEIS.

Table 4-6: Description of Section 4(f) Uses to Architectural Resources - continued

Building Reference # (Figure # in Appendix C)	Address	NHPA Section 106 Effect	Section 4(f) Use	Description of Section 4(f) Use
84 (Figure C-23)	2760 North Frontage Road, Lehi	No Effect	No use	No impact on building or parcel.
85 (Figure C-23)	4175 Thanksgiving Way, Lehi	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of the Proposed Action would require direct use of 0.7 acres of this 5.2-acre parcel, but there would be no effect on the building.
86 (Figure C-23)	4275 Thanksgiving Way, Lehi	No Adverse Effect	Direct Use, <i>de minimis</i>	Implementation of the Proposed Action would require direct use of 0.15 acres of this 1.7-acre parcel, but there would be no effect on the building.

\*Provo/Orem Option D and American Fork Option C are elements of the Preferred Alternative.

Source: Jones & Stokes 2007

Note: The terms *adverse effect* and *no adverse effect* are taken from NHPA Section 106 determinations; see Section 3.16 of this FEIS.

### Direct Use

Construction of American Fork Main Street Options A, B, or C would require a direct use (not *de minimis*) of two buildings in American Fork: 150 West 300 South (Building Reference #50) and 360 West 200 South (Building Reference #56). These buildings are shown in Figures C-11, C-12, and C-13 in Appendix C. The two buildings would be demolished and the Section 4(f) use of these historic resources would result in an NHPA Section 106 determination of Adverse Effect.

Implementation of the Proposed Action would require a direct use (*de minimis*) of the following number of parcels on which architectural resources are located:

- Alternative 4 common areas (Preferred Alternative): 10
- Provo/Orem Option A: 5
- Provo/Orem Option B: 3
- Provo/Orem Option C: 3
- Provo/Orem Option D (Preferred Alternative): 2
- American Fork Main Street Options A and B: 2
- American Fork Main Street Option C (Preferred Alternative): 1

There would not be an effect on the buildings, and the direct use (*de minimis*) of these parcels would result in the NHPA Section 106 determination of no adverse effect. UDOT and FHWA have determined that the use of these historic Section 4(f) resources meets the impact criteria and requirements for a *de minimis* impact finding, as

specified in SAFETEA-LU Section 6009(a). FHWA has informed the Utah SHPO of FHWA's intent to make a *de minimis* impact finding based on the Utah SHPO's written concurrence in the NHPA Section 106 determination. FHWA will also consider the views of any consulting parties participating in the Section 106 consultation before making a finding of *de minimis* use.

#### *Temporary Occupancy*

There are four properties for which temporary occupancy would occur. These properties (including the affected acreages) are identified in Table 4-6 above and listed below:

- 104 Roosevelt, American Fork (Building Reference #57);
- 830 West State Street, Lehi (Building Reference #74);
- 850 West State Street, Lehi (Building Reference #75); and
- 980 West State Street, Lehi (Building Reference #77).

For each of these properties, a temporary construction easement would be required during widening and reconstruction of I-15. The easement would be required for a period of time less than the time required for construction of the proposed project and would not require a change in ownership of the land. The temporary easement would be for construction access or staging only, and no structures or other facilities are planned to be located on this land. After construction has been completed, the land would be restored to its original condition or better. No adverse effects on the land are anticipated; this temporary occupancy would meet all of the criteria outlined in 23 CFR 774.13.

#### *Constructive Use*

By definition, constructive use of historic Section 4(f) resources does not occur if 1) there is a direct use of that resource, or 2) there is an NHPA Section 106 finding of no adverse effect. As indicated in Table 4-6, all of the historic Section 4(f) resources have either a direct use, or finding of no adverse effect. Therefore, there are no constructive uses of historic Section 4(f) resources.

#### **4.5.3 Summary of Use of Section 4(f) Resources**

Table 4-7 summarizes use of the Section 4(f) resources by the Proposed Action with Provo/Orem Options A, B, C, and D, and with American Fork Main Street Options A, B, and C. As discussed in Section 4.5.1, the widening and reconstruction of I-15 would not require a Section 4(f) use of the 23 recreation resources located within one-quarter mile of the I-15 Corridor. There would be no constructive uses of these Section 4(f) resources attributable to implementation of the Proposed Action. There would be three direct uses of Section 4(f) properties that are not *de minimis*. Two structures in American Fork would be demolished due to the widening of the I-15 mainline, and the Provo Viaduct would be demolished during reconstruction of the Center Street Interchange in Provo. Table 4-7 has been updated to reflect changes to the use of the Section 4(f) historic resources since publication of the DEIS.

Table 4-7: Summary of Use of Section 4(f) Resources

Section 4(f) Type of Use	Proposed Action							
	Common Areas*	Provo/Orem Option				American Fork Main Street Option		
		A	B	C	D*	A	B	C*
Direct use, <i>de minimis</i>	20	6	4	4	3	2	2	1
Direct use (not <i>de minimis</i> )	0	1	1	1	1	2	2	2

\*Elements of the Preferred Alternative

Notes: The Proposed Action (Alternative 4) Mainline, Provo Orem Options A, B, C, and D, and American Fork Main Street Options A, B, and C all require a direct use (*de minimis*) of the Denver & Rio Grande Western Railroad. However, this direct use (*de minimis*) was counted only once under the Proposed Action (Alternative 4) Mainline.

Similarly, the Proposed Action (Alternative 4) Mainline and Provo Orem Options A, B, C, and D all require a direct use (*de minimis*) of the Utah Southern Railroad/Union Pacific Railroad, and the direct use (*de minimis*) was counted once under the Proposed Action (Alternative 4) Mainline.

## 4.6 Avoidance Alternatives and Minimization Measures for Section 4(f) Resources

This section discusses FHWA's evaluation to determine whether there are feasible and prudent alternatives to avoid the use of Section 4(f) resources. An avoidance analysis is not required when a finding of *de minimis* use is made for Section 4(f) resources, because Section 4(f) is satisfied completely once *de minimis* applies.

### 4.6.1 Alternatives that Avoid all Section 4(f) Resources

A total avoidance alternative is a feasible and prudent alternative that would avoid all Section 4(f) resources. Alternatives that do not meet purpose and need are not considered feasible and prudent. As described in this chapter, rebuilding I-15 through the 43-mile project area (Alternative 4) would result in the direct use (not *de minimis*) of only three Section 4(f) resources, after the application of all possible planning, avoidance, and minimization to the proposed improvements.

During the alternative formulation and screening process, multiple locational alternatives (e.g., west side Utah Lake highway, east bench highway, arterial improvement) and multimodal alternatives (e.g., combined CR T, Light Rail Transit, Bus Rapid Transit) were considered to determine if the primary purpose and need of avoiding unacceptable congestion on the I-15 corridor could be achieved without rebuilding the mainline I-15 and its interchanges. As described in Chapters 1 and 2, no such alternative could be identified. In effect, this means that any alternative capable of meeting the project purpose and need must include, at a minimum, the I-15 rebuild and its attendant Section 4(f) uses, and that no locational avoidance alternatives exist.

It should also be noted that it would be virtually impossible for any major north-south transportation improvement in the corridor to avoid all Section 4(f) resources. There are numerous linear Section 4(f) resources, both east-west and north-south, throughout the study area that would be impacted by any new or improved transportation facilities. These include the Jordan River Parkway Trail, the Provo River Parkway Trail, and several historic canals and railroads. In addition, historic properties and districts are scattered along the existing north-south and east-west roadways. These Section 4(f) resources are documented in other environmental studies including the Mountain View Corridor, UTA's Provo to Salt Lake City FrontRunner Commuter Rail, Provo Airport Connector Road, SR-68 Improvements between Saratoga Springs and Bangerter Highway (Redwood Road), State Street in Lindon and American Fork (SR-89) Improvements, Lehi East-West Connector Study, Vineyard Connector Study, SR-92 between I-15 and American Fork Canyon, 800 North in Orem between Geneva Road and Provo Canyon, Geneva Road Improvements, SR-77 in Springville between I-15 and State Street.

#### **4.6.2 Avoidance Alternatives and Measures to Minimize Harm for the Direct Use (not *de minimis*) Section 4(f) Resources**

This section discusses FHWA's evaluation of avoidance alternatives and measures to minimize harm to Section 4(f) resources used by the Proposed Action. Avoidance alternatives and minimization measures are not required when a finding of *de minimis* use is made for Section 4(f) historic resources because Section 4(f) is satisfied once *de minimis* applies.

As described in this chapter, after the application of all possible planning to avoid and minimize Section 4(f) use, the Proposed Action would result in the use of only three Section 4(f) resources throughout the 43-mile corridor. Implementation of the Proposed Action would require a use of the following Section 4(f) resources:

- Provo Viaduct;
- 150 West 300 South, American Fork (Building Reference #50); and
- 360 West 200 South, American Fork (Building Reference #56).

Avoidance alternatives and minimization measures were considered for each of these Section 4(f) resources and are described below. The measures to minimize harm are in addition to the measures included in the Memorandum of Agreement (MOA) to mitigate adverse effects to eligible resources (See Appendix A). The MOA is outlined in section 4.6.4.

##### **4.6.2.1 Provo Viaduct**

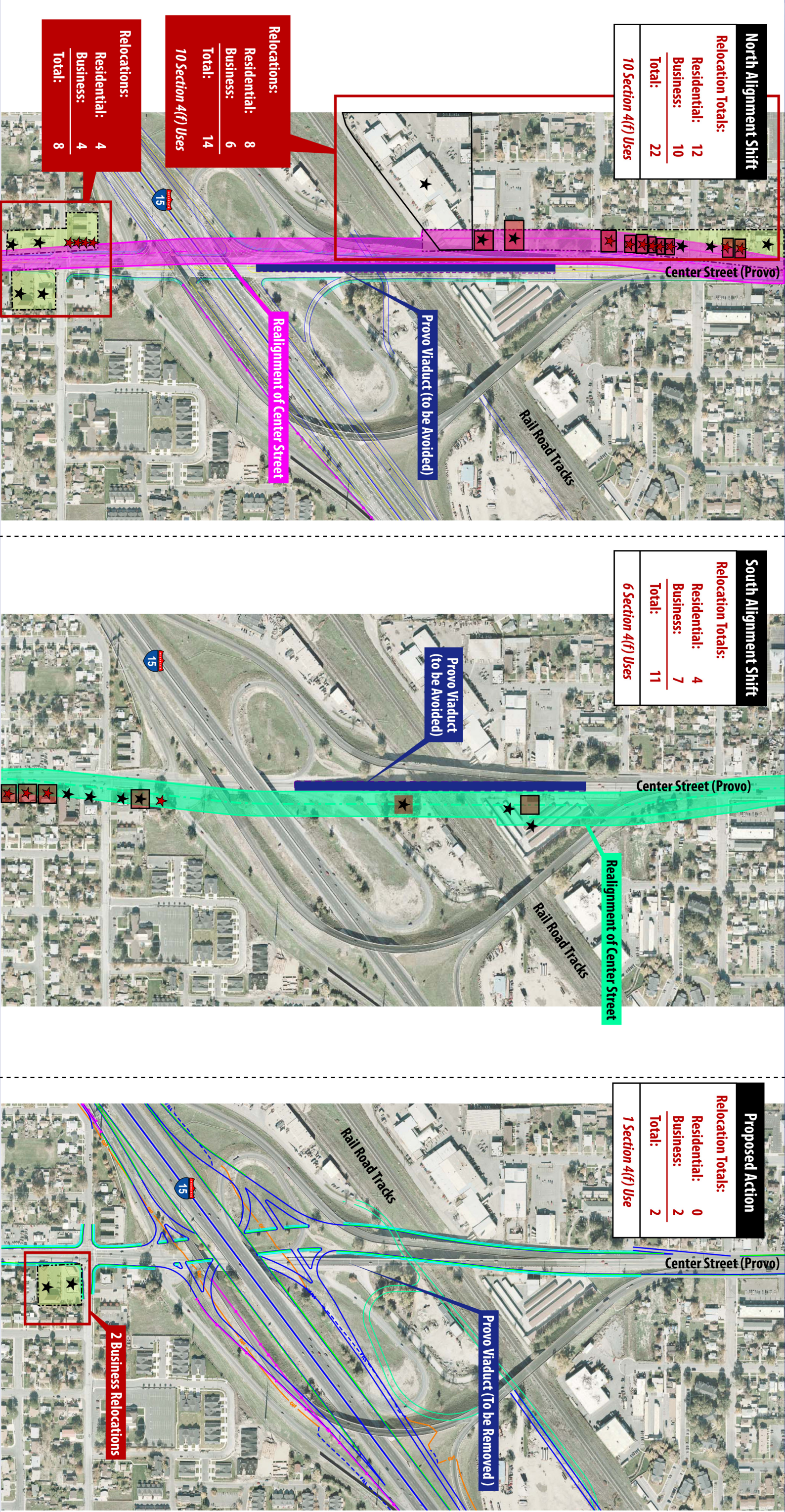
The historic Provo Viaduct is part of the existing Provo Center Street interchange. It is a 1,442-foot-long structure that carries Provo Center Street over the rail corridor located just east of I-15, and provides access from Center Street to I-15 southbound (see Figure 4-5). Under the Proposed Action, reconstruction of the Provo Center Street Interchange would require demolition of the Provo Viaduct.

The existing viaduct is a two-lane roadway with no shoulders. Traffic models indicate that a minimum of five lanes is needed at this interchange and along Provo Center Street. The existing structure would not accommodate the required number or configuration of lanes. In addition, the location of the Provo Viaduct is incompatible with either a diamond or SPUI Interchange on I-15 at this location, requiring that it be demolished.

To assess whether the viaduct might be avoided and left in-place, shifting of the proposed locations of the reconstructed Provo Center Street interchange to the north and to the south of the Provo Viaduct was considered (see Figure 4-5). However, neither of these alternatives is a prudent and feasible avoidance or minimization alternative as outlined below:

- **North shift:** The only potentially feasible location of the new interchange to the north of its proposed location would require the use of 10 historic properties that qualify for Section 4(f) protection. These 10 properties are among the 22 relocations (12 residential units and 10 businesses) that would be required under this alternative. The Proposed Action at Provo Center Street would require only two business relocations and one direct use (not *de minimis*) of a Section 4(f) resource (Provo Viaduct). Because this alternative would actually impact more Section 4(f) resources, and require numerous additional relocations over the Proposed Action, it is not a feasible and prudent avoidance or minimization alternative.
- **South Shift:** The only potentially feasible location of the new interchange to the south of its proposed location would require the use of six historic properties that qualify for Section 4(f) protection. These six properties are among the 11 relocations (four residential units and seven businesses) that would be required under this alternative. The Proposed Action at Provo Center Street would require only two business relocations and one direct use (not *de minimis*) of a Section 4(f) resource (Provo Viaduct). Because this alternative would actually impact more Section 4(f) resources, and require numerous additional relocations, it is not a feasible and prudent avoidance or minimization alternative.





★ Residential Relocations   ★ Business Relocations   Direct Use (non de minimis)

Figure: 4-5  
Avoidance Alternative for the Provo Viaduct





THIS PAGE INTENTIONALLY LEFT BLANK

- **Bridge Safety:** Even if the reconstructed Provo Center Street interchange could be shifted in a way that avoided the Provo Viaduct and other Section 4(f) resources, the existing viaduct is an unsafe structure that would not be left standing for safety reasons. The Provo Viaduct has been deemed structurally deficient and functionally obsolete, with a sufficiency rating of 31.5 from a possible 100 points under FHWA's and UDOT's Structure Inventory and Appraisal system. This qualifies the viaduct for demolition and replacement under the FHWA National Bridge Inspection Standards (NBIS). The bridge rail, approach rail and transition do not meet AASHTO design criteria for safety and are considered substandard. Leaving the structure standing creates a safety risk for the underlying railroad tracks, which in addition to their current traffic will carry commuter rail passenger trains when the Provo to Salt Lake Frontrunner begins operation.

Based on the above, it was concluded that no feasible and prudent avoidance alternatives exist for the Provo Viaduct, and that use of the Provo Viaduct, rather than the use of the many historic structures that would be taken under a north or south alignment shift, would result in the minimal Section 4(f) use, particularly since the Provo Viaduct would likely be demolished for safety reasons even if it could be avoided.

#### 4.6.2.2 150 West 300 South, American Fork (Building Reference #50) and 360 West 200 South, American Fork (Building Reference #56)

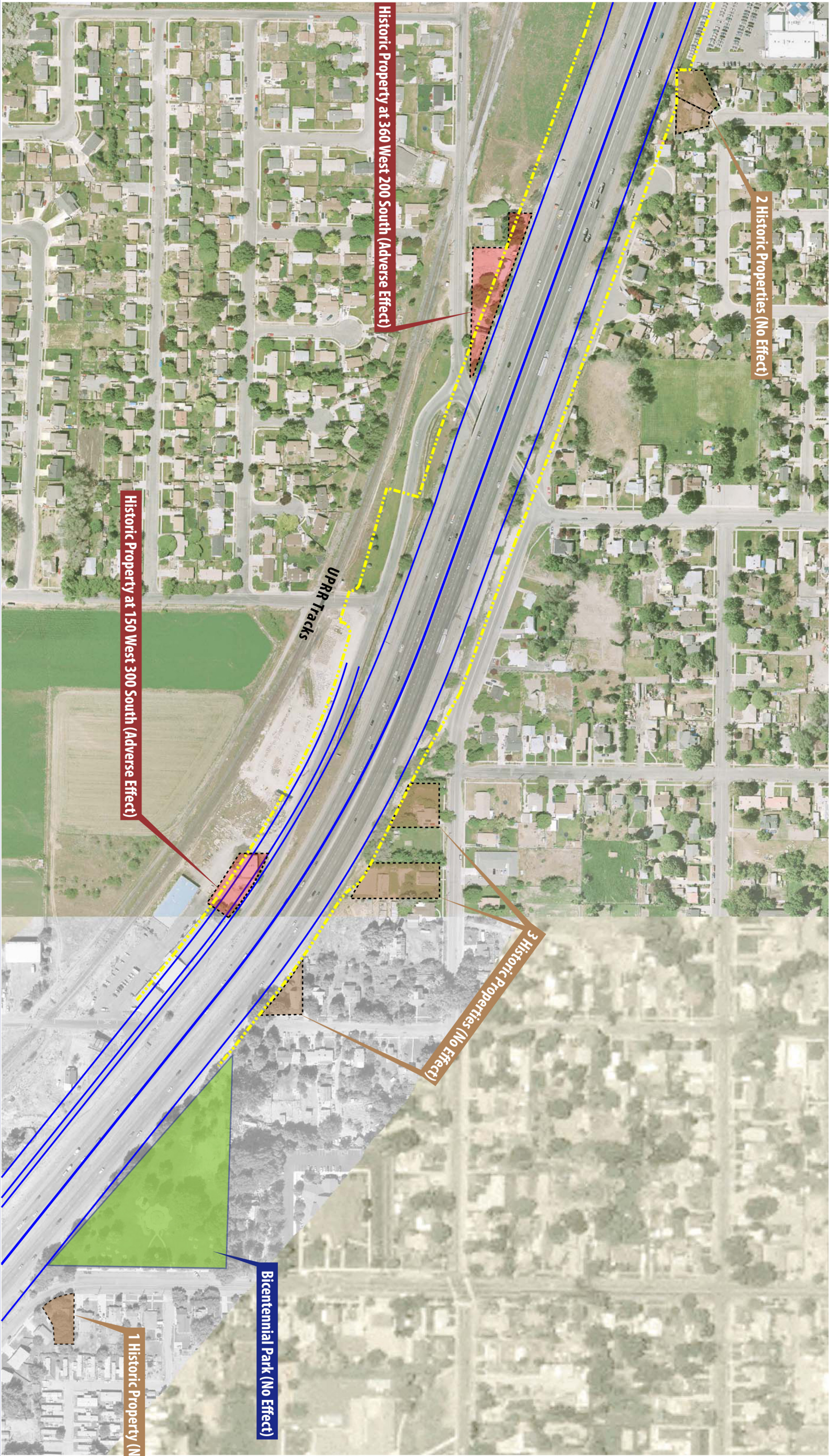
These two Section 4(f) resources are discussed together because they are located in close proximity to each other; both are located west of I-15 within about 1,700 feet of each other. Implementation of the Proposed Action (Alternative 4) would require a direct use (not *de minimis*) of both the historic properties located at 150 West 300 South and 360 West 200 South American Fork as shown in Figure 4-6. Within the American Fork area of I-15 near the Main Street interchange there are eight historic properties; two are located on the west side of I-15 and six on the east side. In addition, the Bicentennial Park (owned and maintained by American Fork City, see Tables 4-2 and 4-4) is located on the east side of I-15. All these resources are provided protection under Section 4(f) and are shown in Figure 4-6. An eastern alignment shift was the only potential feasible and prudent alignment to avoid these Section 4(f) resources. However, an eastern alignment shift as a potential avoidance alternative was determined not to be a feasible and prudent avoidance alternative for the following reasons:

- **Increased the number of Section 4(f) Uses (not *de minimis*):** An eastern alignment would require the direct use (not *de minimis*) of five historic Section 4(f) resources and a direct use of Bicentennial Park. Therefore, the Proposed Action in this location actually causes the least net harm to Section 4(f) resources, by completely avoiding uses to the resources located on the eastside of I-15.
- **Increased Environmental Impacts and Relocations that reach Extraordinary Magnitude:** An eastern alignment shift would require the relocation of 22 residential properties located directly east of I-15 (see Figure 4-7). The Proposed Action would require relocation of four properties; two of which are the Section 4(f) resources. Also, an eastern alignment shift would require impacting the Bicentennial Park and a number of its large and mature trees.

The I-15 mainline alignment in this location was designed as a minimization of harm to Section 4(f) resources. Aligning and widening the I-15 mainline to the west creates a Section 4(f) use of two Section 4(f) resources (150 West 300 South and 360 West 200 South). However, this same alignment avoids direct use (not *de minimis*) of seven Section 4(f) resources (six historic properties and the Bicentennial Park). The avoidance alternative for the two properties on the west side of I-15 is not considered prudent because it increases environmental impacts such as relocations, including the adverse effects on other Section 4(f) resource on the east side of I-15.

THIS PAGE INTENTIONALLY LEFT BLANK





NO SCALE

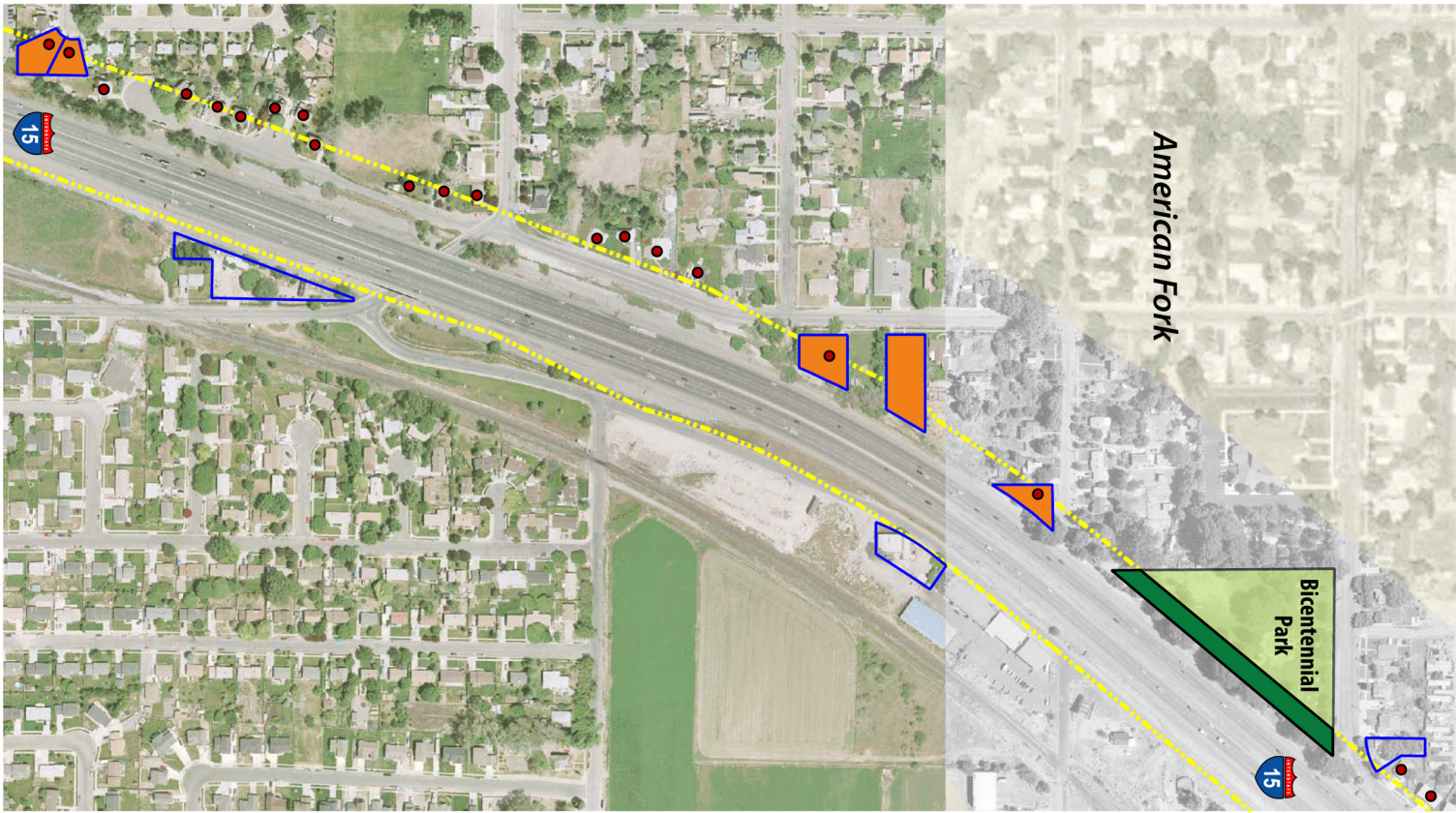
Figure: 4-6  
Proposed Action for American Fork Area



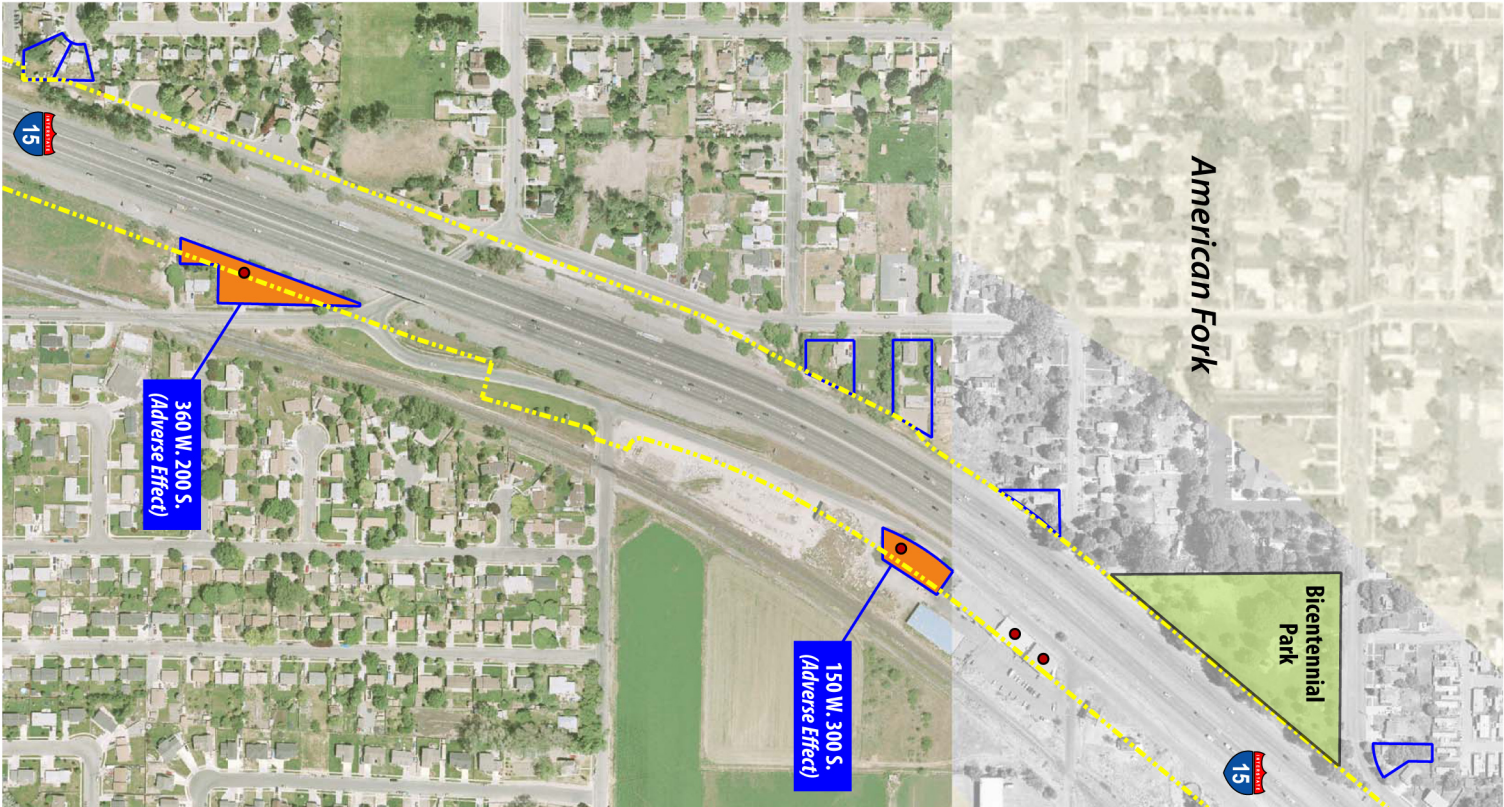


THIS PAGE INTENTIONALLY LEFT BLANK

Alignment Shift



Proposed Action



NO SCALE

Figure: 4-7

Alignment Shift for American Fork

● Relocations

□ Historic Properties - No Section 4(f) Use

■ Historic Properties - Section 4(f) Use

■ Parks - No Section 4(f) Use

■ Parks - Section 4(f) Use



THIS PAGE INTENTIONALLY LEFT BLANK



#### **4.6.3 *Least Overall Harm***

As described in Section 4.2.1.5, the FHWA may approve only the alternative that causes the least overall harm to Section 4(f) resources. For this project, all Section 4(f) impacts would occur in common areas of the build alternative. No Section 4(f) impacts would occur in the option areas in Provo/Orem or at American Fork Main Street. Therefore, there are no alternatives, options, or combinations of options that require a comparison of overall harm.

#### **4.6.4 *Mitigation for Historic Properties***

Consultation with the Utah SHPO regarding NRHP eligibility and effects resulting from a proposed undertaking is required through preparation of a DOE/FOE. As described in 4.5.2 (also in 3.16.1.5), a DOE/FOE for this project was approved by the Utah SHPO in October 2007 and two addendums have been submitted and approved by the Utah SHPO (Appendix A). Because this project will result in adverse effects and avoidance is not possible, a Memorandum of Agreement (MOA) has been prepared to outline responsibilities and measures to mitigate or reduce adverse effects. The ACHP, tribes, certified local governments and interested persons were notified of the potential adverse effects and invited to participate in development of the MOA. Signatories include FHWA, UDOT and SHPO. The MOA was signed May 15, 2008 and is in Appendix A.

Mitigation of adverse effects to the Provo Viaduct will document the bridge to Intensive Level Survey (ILS) standards, set but the Utah State Historic Preservation Office. Mitigation efforts will also document approximately 30 post-WWI bridges in Utah County, to the same standard. For the two historic properties in American Fork, mitigation will document the historic structure on each parcel to ILS standards.

### **4.7 Consultation and Coordination**

Consultation and coordination with the agencies with jurisdiction over the Section 4(f) and 6(f) resources and other interested parties is ongoing and will continue throughout development of the EIS. The relevant Section 4(f) and 6(f) resources and their respective agencies are listed below, including descriptions of consultation and coordination that have occurred to date.

#### **4.7.1 *Section 6(f) Resources —USDOI, Utah Department of Natural Resources (UDNR), Division of Parks and Recreation***

In a letter dated October 8, 2004, USDOI responded to the notice of intent to prepare an EIS for I-15 improvements. The letter identified North Park in Spanish Fork as an LWCF Act property that may be within the project study area and should be considered during preparation of the EIS. In May 2007, the Grants Coordinator for the UDNR Division of Parks and Recreation was contacted regarding any parks or facilities that may have been acquired or developed with funds under Section 6(f) of the LWCF Act since 2004. In response, the Grants Coordinator identified that Hillman Fields in Payson and the Provo River Parkway Trail in Provo had received LWCF Act grants since 2004.

On February 12, 2008, the Grants Coordinator for the UDNR Division of Parks and Recreation was contacted in response to a comment received from the USDOI during the public comment period for the DEIS. The comment stated that three additional parks may be impacted by this project: Smith Fields Park, Utah Lake State Park, and Meadows Park. Discussion with the Grants Coordinator established that Santaquin Meadows Park, is located in Santaquin at 400 East 610 South, approximately 4.64 miles southeast of the South Payson interchange, the southern terminus of the project. Additional investigation determined that Smith Fields Park is located in Draper, more than 0.29 miles east of I-15 and Utah Lake State Park is located in Provo, more than 2 miles west of I-15. Both of these resources are located outside the one-quarter mile study area for recreation resources.

#### ***4.7.2 Provo River Parkway Trail—USDOI, Utah Department of Natural Resources (UDNR), Division of Parks and Recreation, Provo City, and Utah County***

Information obtained from the Grants Coordinator for the UDNR Division of Parks and Recreation in May of 2007 indicated that the portions of the Provo River Parkway Trail improved with LWCF Act grants were not located near I-15.

On August 27, 2007, a meeting was held with Provo City to discuss potential impacts on the trail during construction. The city stated that it had no objection to closing the trail for reconstruction of the bridge, as long as a detour was available at 820 North or Center Street during the construction period. The city also expressed interest in widening the trail from 5 feet to 10 feet under the bridge.

Provo City agreed that the assertions presented above would not adversely affect the ongoing functionality of the Provo River Parkway Trail for recreational use during the widening and reconstruction of I-15, in writing, on May 1, 2008.

#### ***4.7.3 Historic and Archaeological Resources—Utah SHPO and ACHP Pursuant to NHPA Section 106***

A Class III archaeological resources inventory and reconnaissance-level survey of buildings were performed, and a DOE/FOE was submitted to the Utah SHPO by UDOT and FHWA. Section 3.16 Cultural Resources and Section 4.4.2 Historic Properties outline SHPO consultation for this project. FHWA informed the Utah SHPO of its intent to make a *de minimis* impact finding based on the Utah SHPO's written concurrence in the NHPA Section 106 determination. An MOA is being prepared and executed between FHWA, UDOT, and SHPO prior to construction of the project. FHWA will also consider the views of any consulting parties participating in the Section 106 consultation before making a finding of *de minimis* use.

In a letter dated January 12, 2005, the Utah Geological Survey (UGS) reported that 1) the project qualified for treatment under the memorandum of understanding between UDOT and UGS (UCA-63-73-19), which means that a file search is adequate for documenting paleontological localities within the project corridor; 2) based on a file search, there are seven known paleontological localities within the project right-of-way; 3) if fossils are discovered as a result of construction activities, a paleontologist should be notified; and 4) this project should have no impact on paleontological resources.

#### ***4.7.4 Archaeological Resources—Native American Tribes***

FHWA is responsible for contacting and consulting with the Native American tribes for the project. A project description and vicinity map were sent to the affected tribes, along with a request for any information they may have about the project area, in December 2004. No responses were received. A second letter was sent in May 2007, and only the Confederated Tribes of the Goshute Reservation responded, indicating they had no comment on or objection to the proposed project. No other responses were received.

### **4.8 Section 4(f) Determination**

Based on the above considerations, there is no feasible and prudent alternative to the direct use of the Provo Viaduct, 150 West 300 South in American Fork or 360 West 200 South in American Fork, and the proposed action includes all possible planning to minimize harm to the Provo Viaduct, 150 West 300 South in American Fork or 360 West 200 South in American Fork.